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Learning and power in international farmer exchanges

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Learning and power in international farmer exchanges

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DEDICATION

To Jean E. and Carl A. Totemeier.

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ABSTRACT

The “Bridging the Gap” program provides an opportunity to explore the relationships between learning and power in international agricultural development partnerships. A USAID-funded partnership between Iowa State University and Volunteer Efforts for Development Concerns, this farmer-to-farmer program sent groups of Iowan women farmers to Uganda to teach Ugandan women farmers with the objectives that Ugandans would move from subsistence to commercial farming and that both groups would benefit from the cultural exchange. Data were collected primarily through semi-structured qualitative interviews of 28 Ugandan farmers, 7 Iowan farmers, and several program staff, and were analyzed using a grounded-theory approach. This thesis explores what and how each group of farmers learned from the other, the impacts of learning on power and vice-versa, and makes recommendations to encourage mutual learning in similar programs.

Both Ugandan and Iowan farmers learned through the “Bridging the Gap” program. Learning by members of both groups included ordinary learning, which helped them achieve their preexisting goals, and transformational learning, which shifted their frames of reference and the goals and power relations embedded therein. The experiences of farmers in the program support the argument that power distorts the learning process. The greater power of the Iowan farmers presented cognitive barriers to their learning from the Ugandan farmers, which were not fully addressed through the program design. The power differences were, however, reduced slightly as

both groups of farmers learned from each other over time, particularly when it was recognized that the Iowan farmers could and did learn from the Ugandan farmers.

Analysis of the experiences of farmers in the "Bridging the Gap" program suggests several ways to increase learning by American farmer-volunteers. Learning by American farmers can be promoted in such programs through supporting more informal conversations during the exchanges, providing service-learning-inspired reflection activities for both groups of farmers, and facilitating communication between American and host-country farmers between exchanges.

CHAPTER I

INTRODUCTION

The eighth Millennium Development Goal promotes partnerships for international development, yet leaves critical elements of learning and power within these partnerships unaddressed. The positioning of Iowan farmers as teachers and facilitators of learning for Ugandan farmers in the "Bridging the Gap" program provides a case to explore the relationships between learning and power in international agricultural development partnerships. This research documents learning by Ugandan and Iowan farmers, explores the role of power in shaping learning through the partnership, and offers recommendations for facilitating empowerment through mutual learning in future partnerships.

Learning and Power in Partnerships

Partnerships for agricultural development are most successful[1] when all partners collaborate to exercise control over program goals, design, and implementation (Johnson & Wilson, 2006). Past research suggests that such collaboration is often hindered when one partner enters the partnership with

[1] Especially when success is measured through the empowerment of farming communities, but also when success is measured through technology adoption or farm productivity (see literature review).

greater power than the other (Johnson & Wilson, 2006). Power both influences and is influenced by the processes of learning within a partnership. The more powerful partner faces increased difficulties learning from the less powerful partner (Babikwa, 2004a,b). However, power differences may be reduced when the more powerful partner learns from the less powerful partner (Babikwa, 2004a,b; Johnson & Wilson 2006).

Learning can be characterized as "ordinary" when it helps the learner to achieve pre-existing goals, or "transformational" when it changes the learner's frames of reference, leading to new goals and new sources of meaning for the learner (Mezirow, 2000). Transformational learning is particularly relevant to international development partnerships because it has the potential to change the power relations imbedded in a partnership (Mezerow 2000, Percy 2005).

The "Bridging the Gap" Program

The "Bridging the Gap" program was a farmer-to-farmer program[2] designed to promote learning by Ugandan farmers. The bulk of learning took place through a series of farmer exchanges in 2011 and 2012. Farmer-to-farmer programs are authorized by the United States Congress, and involve farmer-volunteers from the United States traveling to a developing "host country" to teach resource-poor farmers about agricultural production, processing, and marketing. The objectives of

[2] The set of farmer-to-farmer programs authorized in 2008 fall under the "John Ogonowski and Doug Bereuter Farmer-to-Farmer Program" of the United States government.

farmer-to-farmer programs are to promote economic development in the host country and provide the benefits of cultural exchanges to people in both the host country and the United States (Joslyn, et al., 2012).

The “Bridging the Gap” program was funded by the United States Agency for International Development (USAID) and designed by Iowa State University (ISU) and Volunteer Efforts for Development Concerns (VEDCO), a Ugandan non-governmental organization. Groups of Iowan farmers traveled to Uganda through this program to teach groups of Ugandan farmers about methods to improve grain quality, market collectively, increase crop production, and keep farm records. The primary objective of these lessons was to help women farmers in Uganda transition from subsistence farming to farming as a business.

The “Bridging the Gap” program was designed to promote learning by Ugandan farmers, but learning by Iowan farmers is also important. When developed country partners are willing to learn from their developing country partners, both groups benefit. The developed country partner benefits from the knowledge, values, and priorities they learn from the developing country partner, and also become better at using their knowledge to facilitate community development by taking the time to understand their developing country partner. Developing country partners become empowered to teach as well as to learn. Through teaching theie developed country partners, the developing country partners come to value and build on their own knowledge.

Planning and Agricultural Extension

The "Bridging the Gap" program is an exercise in agricultural development that is relevant to planners and agricultural extension workers. Planning is a professional practice that attempts to manage the public domain in the public interest (Brooks, 2002). The outcome of successful planning is development, broadly defined as shared progress towards a worthy goal. In this sense, agricultural extension can be seen as a subtype of planning, with agricultural extension workers filling the role of the planner in agricultural development efforts.

A broad definition of agricultural extension is the provision of support to farmers to increase the productivity of their farms, reduce their vulnerability to shocks, and encourage them to organize and become empowered (Farrington et al., 2002). Agricultural extension in developing countries is traditionally the domain of the public sector, as agricultural development is seen as a responsibility of government and a source of State legitimacy (Farrington et al., 2002; Swanson & Samy, 2002). Traditionally, government provision of extension services has focused on technology transfers to increase farm yields, often to the neglect of reducing farmers' vulnerability or encouraging their empowerment (Farrington et al., 2002; Butler & Mazur, 2007). The absence of meaningful opportunities for farmer participation in extension services is recognized as having contributed to this lack of farmer empowerment, and increased participation by farmers in agricultural extension presents an important opportunity for such empowerment (Worth, 2006; Butler and Mazur 2007).

Forms of agricultural extension where farmers learn from each other have become increasingly popular around the world since the 1980s, and offer a promising complement to the linear, technology transfer model of the 1960s and 1970s. Farmer-to-farmer learning has been found to be effective at improving rural livelihoods (Chambers, Pacey, & Thrupp, 1989), and is responsible for the spread of agricultural innovations in both developing and developed country contexts (Thrupp & Altieri, 2001). Meanwhile, the rollback of government services under the Washington Consensus in the 1980s has led to increasing involvement of Non Governmental Organizations (NGOs) in the provision of agricultural extension services. The "Bridging the Gap" project continues in the tradition of NGO facilitated farmer-to-farmer learning, but raises new complexities as farmers from the United States are put into the facilitation role traditionally occupied by agricultural extension workers in developing countries.

Research Questions

This research analyzes learning and power in agricultural development partnerships using the case of the "Bridging the Gap" program. Specifically, it explores four issues. First, to what extent and under what conditions do developed and developing country partners learn through such partnerships? Second, if learning occurs, to what extent and under what conditions is it transformational or ordinary? Third, how does power impact learning in these partnerships? Fourth,

can transformational learning change the power relations between developed and developing country partners?

Personal Motivations

My motivations for undertaking this line of research are rooted in my personal experiences of empowerment while overcoming childhood mental illness, of volunteer advocacy work on international development issues in my hometown of Des Moines, Iowa, and of trying to learn from community organizers while interning in South Africa during college. During my struggles with mental illness, I realized that I would only recover through actively participating in and contributing knowledge to the process of my recovery. Several of the breakthroughs in my treatment were the result, in part, of my own contributions of knowledge to health-care experts. This process taught me that my knowledge was valuable despite my relatively powerless position within the social context of therapy. It also provided me with a strong desire to contribute to society and a powerful subjective experience of empowerment through the active participation of the person with less power in the context of the intervention. As a person who is privileged on many dimensions, I may not have become interested in the relationships between learning, power, and development without this experience.

An internship in Egypt after high school led me to recognize the role of policies in keeping people poor and disenfranchised. Growing up, I had largely overlooked the role of policies and power in shaping my own community. My

experiences in Egypt sensitized me to these issues and led me to volunteer as an organizer in Des Moines, Iowa, working to change the policies that keep people poor. Over five years of advocacy, I had numerous conversations with ordinary Americans about development policies and human rights. I became convinced of two things. First, that most people do care about alleviating the suffering of the poor but that many need support and permission to translate this concern into action. I found sharing stories in small groups to be a particularly powerful method for allowing concern to emerge. Second, that the narrative of poverty alleviation as a form of charity, particularly in the case of international development, is often a barrier to engagement by ordinary people. While I did not have evidence to prove it, I became convinced that support for long-term development efforts requires a narrative of solidarity based on mutual learning and mutual empowerment through sharing stories.

As an intern with several community organizing NGOs in South Africa, I attempted to put my beliefs in mutual learning and empowerment into practice. In South Africa my higher education, American nationality, White ethnicity, and male gender placed me in a position of power that often led to my knowledge being privileged over that of the majority of South Africans and at times even over that of my mentors. While I was able to learn important lessons from my mentors, I came away with the troublesome intuition that I could have learned a great deal more. I found it even more troubling that I was unable to articulate exactly what I should have learned and why I failed to learn more than I had.

I studied this topic out of these personal experiences, combined with my desire that my thesis be useful to international development practitioners and my personal desire to return to Africa. My original hope had been to return to South Africa, but the existing relationship between ISU and VEDCO and the timeliness of my arrival at ISU to the "Bridging the Gap" farmer-to-farmer program led me to conduct my research in Uganda. As in South Africa, I received privileged status in Uganda as an educated, White American male[3]. I attempted to mitigate the impacts of this privilege on my research by partnering with VEDCO staff, but I am not so naïve as to believe that I was entirely successful.

As in South Africa, I learned important lessons from people in Uganda. As in South Africa, I left with the intuition that I could have learned much more if I had only known how to ask the appropriate questions. I hope that this research makes some contribution to our understanding and practice of learning within the power-laden context of international development.

Thesis Outline

This thesis begins with an overview of trends in agricultural development and the theories of partnership, empowerment, learning, and power as they relate to international development partnerships. The "Bridging the Gap" program and the methods of data collection and analysis are then explained. Next, learning by

[3] I wish to note here that I am also privileged in the United States by my ethnicity, gender, education, socio-economic status, and other factors. My privileged position is arguably more subtle, but no less real, in the United States.

Ugandan and Iowan farmers is documented and analyzed. The relationships of learning and power in the “Bridging the Gap” program are explored, and the experiences of farmers in this program are developed into recommendations for similar farmer exchange programs in the future.

CHAPTER II

LEARNING AND POWER IN AGRICULTURAL DEVELOPMENT PARTNERSHIPS

The role of farmers in agricultural development has shifted over the past 50 years towards more active forms of participation (Swanson, 2008). Originally, national agricultural extension programs were tasked with ensuring food security on the national level. As many countries in Latin America and Asia achieved national food security in the 1970s and 1980s, national agricultural extension programs were expanded to focus on achieving food security and sustainable livelihoods on the household level. It is recognized (Swanson, 2008) that household-level food security through sustainable livelihoods requires farmers become empowered to generate and share knowledge as well as acquire and apply it. This is especially true in high-risk agro-ecological regions, where agricultural development through technology-transfer alone has been elusive (Chambers, Pacey, & Thrupp, 1989).

Participatory forms of extension in which farmers also generate and share knowledge represent a shift in the balance of power in so far as farmers use this opportunity to help determine the goals and direct the implementation of agricultural development efforts in their communities. Evidence that farmers gain power through participatory forms of extension has been recognized by the Food

and Agricultural Organization (FAO) of the United Nations, which notes that some politicians may even discourage participatory extension methods for fear that the farmers will begin to demand greater accountability and access to resources (Swanson, 2008). As farmers increasingly generate and share knowledge through participatory extension programs, there is an opportunity for agricultural researchers and extension workers to learn from farmers, with potentially transformative impacts on both groups and on agricultural development outcomes (Babikwa 2004a; Worth 2006, 2009). However, power distorts the learning process in a way that presents particular challenges to learning by the more powerful partner. Transformational learning presents an opportunity for both partners to become empowered and for the partnership to become more equal.

The Emergence of Participation in Agricultural Development

Participatory approaches to agricultural development emerged as the goals of agricultural development became broader and the problems facing agricultural extension workers became increasingly complicated. Over the past 50 years, this increasing complexity of agricultural development has led modernist approaches to extension with low levels of farmer participation to be supplemented with more participatory approaches that are better able to deliver on multiple goals in complicated environments.

The Modernist Approach to Development

In the 1940s and 1950s, the development was defined narrowly as modernization. To modernize was to industrialize economically and westernize culturally. The modernist approach to planning established planners as social engineers rationally managing the development of public spaces under the legitimacy of State power (Brooks 2002). Because agricultural development was seen as a responsibility of government and a source of State legitimacy (Farrington et al., 2002; Swanson& Samy, 2002), agricultural extension workers also operated in the public space under the modernist approach.

The emphasis on development as modernization and the use of the modernist approach to planning resulted in a variety of national social engineering efforts (Scott, 1999). Many governments initially attempted to industrialize by shifting productive resources away from agriculture and towards industrial sectors of the economy (Rapley, 2007). Efforts to modernize agriculture focused on large farms and plantations as the engines of agricultural growth. Smallholder farmers, the majority in many countries, were as a rule either neglected or coerced into the plantation or industrial sectors. Under early sectorial models of development, agriculture was treated as a source of surplus capital and labor for State-led industrialization efforts (Rapley, 2007).

Under the modernist approach to development, the provision of agricultural extension services focused on technology transfer to increase farm yields. In many colonies and newly independent countries, extension services were initially geared

towards large-scale or plantation agriculture. This changed as a "small farmer first" narrative of agricultural development emerged in the 1960s, in which agricultural development and national food security was seen to hinge on increasing yields by smallholder farmers (Ellis & Biggs, 2001). During the 1960s and 1970s, agricultural extension efforts focused on technology transfer to increase yields of staple crops on small and medium size farms, with the goal of achieving national food security. Through the Green Revolution, this production-oriented, technology transfer approach to extension led many countries in Asia and Latin America to become food secure. However, gains were focused on areas of high agricultural potential, and much of Africa was bypassed entirely.

Increasing Complexity Encourages Participatory Approaches

Under the technology-transfer approach to extension, participation by farmers was limited to the expectation that they would learn and adopt the improved agricultural practices that were promoted by agricultural extension workers. Farmers were expected to learn but not to generate knowledge, much less teach. This began to change in the 1980s, when more participatory approaches to agricultural extension gained strength due to both the successes and failures of the Green Revolution. The successes of the Green Revolution in achieving food security globally and in many developing countries led many governments and international organizations to expand their goals for agricultural development to include household-level food security. The failure of the Green Revolution to address

complex social and environmental challenges in areas of lower agricultural potential, including much of Africa, encouraged international development organizations to explore alternative approaches to agricultural extension.

As the goals of agricultural development expanded to include a focus on household-level food security and sustainable livelihoods, the need for greater levels of farmer-participation became increasingly recognized. Technology transfer works best when the objectives of agricultural development are narrow, the problems to be solved have few dimensions, and solutions are possible through a technology or package of inputs (Black, 2000; Worth, 2009). As agricultural development expanded to include household-level food security through sustainable livelihoods, the objectives became broader than the narrow focus on aggregate productivity, the problems gained ecological and social-equity components in addition to the economic[4], and solutions began to require new forms of knowledge and new ways of organizing in farming communities that were not amenable to a simple technological fix (Chambers, Pacey, & Thrupp, 1989).

At the same time as the goals and the definition of problems that agricultural development was expected to solve was becoming more complex, the legitimate participants in agricultural development efforts were becoming more diverse. Neoliberal economic policies and the Washington Consensus led to the reduction of

[4] The emergence of sustainable development as an international standard in the 1980s and 1990s led to a focus on three dimensions of development: social, environmental, and economic (World Commission on Environment and Development, 1987).

government funding for agricultural extension in many developing countries. The reduction in State support forced development practitioners to derive legitimacy directly from the people and opened space for non-governmental organizations to take a greater role in agricultural extension projects (Black, 2000).

In Uganda, Washington Consensus policies influenced the creation of the National Agricultural Advisory Service to support registered non-governmental and private-sector organizations in delivering agricultural extension services (NAADS Secretariat, 2000). Greater involvement of non-governmental organizations in agricultural extension provision was coupled with an increasingly explicit focus in many countries on including traditionally disadvantaged social groups such as women, indigenous, and cultural minorities. Including these groups provided further justification for participatory methods of extension by increasing the complexity of the problems that agricultural development was expected to solve, and because many of these marginalized groups lived in high-risk agro-ecological areas that were not amenable to fixes through technology alone.

The farmer-field-school approach to agricultural extension served as a bridge from technology transfer to more radically participatory approaches such as participatory rural development and participatory plant breeding. Farmer-field-schools initially involved organizing farmers into groups to test and adapt the advice of agricultural extension workers to the conditions in their communities. This approach was widely promoted after it successfully spread integrated pest management practices in Indonesia (Swanson, 2008). In many cases, farmers

expanded on the initial objectives of learning and adapting extension workers' knowledge by generating and sharing knowledge with each other on their own. Farmer participation has been found to be effective at improving rural livelihoods (Chambers, Pacey, & Thrupp, 1989), and is responsible for the spread of agricultural innovations in both developing and developed country contexts (Thrupp & Altieri, 2001).

Farmer-field-schools are emblematic of a larger set of farmer-to-farmer extension methods, in which farmers are organized and supported to teach and learn from each other. In farmer-to-farmer extension, farmers are expected to teach as well as learn, and they may develop the ability to influence the implementation of the agricultural development program. In more radically participatory farmer-to-farmer extension methods, some of which fall under the umbrella of participatory action research and participatory technology development, farmers help set the goals and select the methods through which agricultural development programs take place[5]. For example, participatory action research methods may involve an agricultural extension worker working with a rural community for several years to determine their goals, develop a strategy based on their concerns and preferences, and connect them to resources, supplemental technologies and expert knowledge to help them implement their strategy. Participatory technology development may involve breeders working alongside farmers in their fields to help them develop

[5] See Black (2000) for a summary of participatory extension methods and their characteristics, strengths, and weaknesses.

new crop varieties that have traits that are desirable to the farmers. In both of these strategies, farmers become empowered to teach agricultural extension workers as well as other farmers.

Participation, Mutual Learning, and Empowerment

Participatory approaches to development fall on a spectrum from non-participation by the intended beneficiaries to their full control over development processes. Arnstein (1969) argued that participation could be divided into three broad categories, based on the extent to which the beneficiaries control the planning process over the dimensions of goal setting, design, and implementation. The first category, non-participation, occurs when beneficiaries are not involved in setting the goals or designing the program, and are either minimally involved in implementation or are expected to implement the program without providing feedback or making changes. Technology transfer approaches to extension would be considered non-participation under her framework. The second category, token participation occurs when beneficiaries are not involved in setting the goals of the program; they may be involved in program design and are able to offer feedback and make some decisions during implementation. Farmer field schools and less participatory forms of participatory rural development and participatory plant breeding would fall under token participation. The third category of full participation occurs when beneficiaries are involved in setting the goals, designing, and implementing the program, with significant power to influence each of these

dimensions. The more radically participatory forms of participatory action research and participatory technology development could be considered as full participation under Arnstein's model.

Table 1: Levels of Beneficiary Participation in Common Extension Methods

Level of Beneficiary Participation	Agricultural Extension Method
Non-Participation • Not involved in setting goals • Not involved in program design • May be involved in implementation	• Technology Transfer • Training and Visit
Token Participation • Not involved in setting goals • May contribute to program design • Are highly involved in or control implementation	• Farmer Field Schools • "Bridging the Gap"
Full Participation • Are involved in or control setting goals • Control program design • Control implementation	• Participatory Action Research (Radical) • Participatory Technology Development (Radical)

Participation and Empowerment

In addition to the instrumental value of participation in helping solve complex agricultural development problems, participation is arguably of intrinsic moral value through its ability to generate empowerment (Sen, 1999). The concept of empowerment originated in social psychology to describe the feeling of competence that comes from controlling one's environment and has since been transported into and transformed by narratives on community development and

critical theory (Zimmerman et al., 1992). Taking into account the contributions of community development and critical theory, empowerment can be described as operating on the organizational and the community levels in addition to the individual level (Perkins & Zimmerman, 1995; Speer & Hughey, 1995). In this framework, individual empowerment is conceptualized as operating synergistically through organizational and community empowerment.

On an individual level, psychological empowerment can be measured on three dimensions. The intrapersonal dimension of empowerment consists of self esteem and feelings of competence, the interactional dimension consists of the ability to relate ethically and appropriately with others to control a shared environment, and the behavioral dimension of empowerment is manifested by acting alone and with others to exert control over an environment (Zimmerman et al., 1992).

Empowered communities are those in which individuals and organizations are able to come together across barriers of diversity to constructively address common needs (Speer & Hughey, 1995). Such empowerment is arguably a critical component of development (Sen, 1999; Worth, 2006) and is becoming a key goal of and justification for agricultural extension programs (Farrington et al., 2002; Swanson & Samy, 2002; Worth, 2006).

Empowerment and Power

The concepts of empowerment and power are each heavily contested in academia. One common definition of empowerment *as a process* is "enhancing an individual's or group's capacity to make purposive choices and transform that choice into desired actions or outcomes" (Alsop, 2005, in Chambers, 2006). As a *state of being*, empowerment consists of three things (Zimmerman et al., 1992). First, it involves subjective feelings of competence and worth. Second, it requires appropriate and ethical relationships with others. Third, it is expressed through actions to influence or control an environment.

Power can be defined simply as: "the ability to achieve a wanted end in a social context, with or without the consent of others" (Vermulen, 2005, in Chambers, 2006)[6]. Power may be exercised without the consent of others through force or coercion, or it may be exercised with others' consent, as through influence. Greater power is associated with greater access to material and social resources, which provide an agent with more pathways to influence others to comply with the powerful agent's desires.

Empowerment and power are similar in that both involve agency and the ability for someone – an individual, group, or community – to impact others in a shared, social environment. They differ in that empowerment has an explicit normative dimension, while power does not. Empowerment is seen as morally

[6] This definition corresponds most closely with the category of "power over" as described by VeneKlasen and Miller (2002).

good, and empowered agents are expected to form appropriate and ethical relationships with others. By contrast, the morality of power depends on how it is used. Power is bad when it is abused, and one ethically valid response to abuses of power is to level the power-gradients that enable power to be abused. On the other hand, Chambers (2006) argues convincingly that powerful agents can, and sometimes do, use their power for good.

Mutual Learning and Empowerment

The realization that participation must be appropriately structured to lead to empowerment has led critical theorists to emphasize the non-neutrality of planning knowledge and action (Babikwa, 2004a,b). Critical theorists have traditionally argued that for participation to be empowering, it must emphasize the leveling of power gradients by challenging the systems of knowledge and action that recreate cultures of oppression (Babikwa, 2004a).

Differing from the history of critical theory, Babikwa (2004a) argues convincingly that true empowerment must be seen as the process through which individuals co-create power to effect change on their individual and shared environments. He therefore emphasizes a more collaborative approach to participation, while still insisting that participants be allowed real control over the structure of their engagement with the planner or extension agent. Chambers (2006) expresses similar ideas in calling for an explicit “Pedagogy for the Powerful”, which would help those with power over others in a given context to use

it in a mutually empowering manner. Babikwa's experience designing and implementing participatory agricultural extension programs in Uganda has convinced him that:

> "...assuming that some people have power and others do not is a serious source of disempowerment for all people. In this case, the power of the so-called powerless is not utilized, while at the same time the powerlessness of the so-called powerful is not addressed, yet the two are important in addressing fundamental causes of disempowerment." Babikwa (2004a:76)

Mutual learning in participatory agricultural extension programs is important to their effectiveness at generating mutual empowerment (Worth, 2006). In order for participatory extension to be empowering, Worth (2006, 2009) argues that agricultural extension agents must involve rural communities from the beginning in setting the priorities and structure of their educational program, and that extension agents must approach farmers as collaborators in a quest for knowledge rather than assuming an uncritical air of expertise.

In studies of the relationships between agricultural extension officers and farmers in Southern Africa, Worth (2006, 2009) found that agricultural development is more effective when extension workers learn from farmers. Worth attributes the increase in effectiveness to a transformation in the relationship between extension officers and farmers. In the traditional extension officer - farmer relationship, the farmers are passive clients and recipients of the extension officers' knowledge. Once extension workers begin to learn from farmers, Worth argues that the relationship transforms into a true partnership based on mutuality and

equality. Studies of participatory methods of agricultural development in Uganda support the contention that learning by the more powerful partner can shift the relationship towards mutuality with positive developmental benefits (Babikwa, 2004a,b).

Learning by the Powerful in International Partnerships

There are many studies of developing country partners learning useful information from developed country partners in international development partnerships. Aside from examples where developed country partners learned how to better help developed country partners benefit from the partnership, a literature search has revealed relatively few studies of developed country partners learning from developing country partners through international development partnerships. This is unusual, as developed country partners are commonly considered to be able to learn from developing countries (Johnson & Wilson, 2006), and there is an expectation among development practitioners that learning can be two-way (Brown, 1997; Institute of Development Studies, 2010; Sinclair, 2012).

In one example of documented learning by a developed country partner that was useful to them back home, Johnson and Wilson (2006) studied an international exchange program that included mutual learning between town planning practitioners in Uganda and the United Kingdom. They found that planners in the United Kingdom learned new methods of citizen engagement from their Ugandan peers, and that the process of learning from Ugandans led the United Kingdom

practitioners to re-conceptualize development as a mutual effort among peers rather than a traditional donor-recipient relationship. Johnson and Wilson argue that the construction of mutuality through learning is applicable to partnerships in areas beyond town planning. Senior staff at Oxfam America also point to a few specific areas where organizations in developed countries learned from those in developing countries, including popular budgeting, anti-slavery tactics, methods of organizing laborers, and methods for promoting ethical consumerism (Sinclair, 2012)[7].

The relative absence of documented learning by developed country partners from developing country partners may be traceable to the role of power in these partnerships. In a traditional international development partnership, the developed country partner works with a developing country partner with a primary goal being to support the developing country partner to achieve progress towards some worthwhile goal. As a general rule, developed country partners in this form of international development partnership are more powerful than developing country partners. This claim is based on the fact that partners from developed countries almost always have access to greater economic and geopolitical resources than do partners from developing countries and that the developed country partners are framed as "helping" the partners from developing countries.

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[7] The "We Can" campaign to end violence against women is another example of an organizing strategy that originated in South Asia and has since been transferred to Canada (www.wecanbc.ca).

Of course, there is variation in the levels of access to resources within both developed and developing countries. It is therefore incorrect to claim that developed country partners are invariably more powerful than developing country partners or that the power disparity between partners from different countries is always the same. The balance of power in any relationship involving participants from multiple countries depends not only on the status of the countries involved but also on the personal histories of participants from each country, their levels of access to resources, and the levels of privilege or discrimination they experience in their societies[8].

Possible Barriers to Learning Through Program Design

Speculation about how power might make it difficult for developed country partners to learn from developing country partners yields multiple mechanisms. One possible mechanism would occur when mutual learning is not considered during the design of a partnership due to assumptions about the possibility and ethics of learning from developing country partners. Other mechanisms may include the lower incentive for developed country partners to learn and the greater

[8] Farmworkers in the United States are socially and economically disadvantaged and face discrimination, which at times puts them at a similar level of power to the developing country labor movements that they learn organizing methods from (Sinclair, 2012).

likelihood of developed country partners to overlook the viewpoints and values of developing country partners[9].

It would be expected that the greater power of the developed country partner in an international partnership gives them a greater influence on the design of the partnership. Thus, when developed country partners do not place much value on learning from developing country partners, the partnership is unlikely to be designed in a way that facilitates this learning.

Either of two assumptions may be expected to motivate a developed country partner to exclude mutual learning from the design of a partnership. Developed country partners may assume that the developing country partners have little valuable knowledge to teach them. Alternatively, partners from developed countries may assume that it would be unethical to dedicate resources to learning from the developing country partners. Either of these assumptions may or may not be shared by the developing country partners. Mutual leaning is unlikely to be built into a program design when both partners share the assumption that developing country partners have little to teach developed country partners or that it would be unethical to allocate resources to this purpose.

[9] These mechanisms may also distort the reporting of learning by developed country partners from developing country partners. Researchers may accept the same assumptions about mutual learning that lead it to be excluded from the design of some partnerships, or may choose to focus on learning by developing country partners because they are seen as more likely to learn and therefore to provide information to draw conclusions from.

There are several possible outcomes on partnership design when one or both of these assumptions is held by the developed country partner but not by the developing country partner. The developing country partner may choose not to voice their disagreement, due to a real or perceived lack of receptivity by the developed country partner. If developing country partners choose to share their divergent views with the developed country partners, the developed country partners may agree to modify the design of the partnership accordingly or they may resist changes to the design. If the developed country partners resist, it seems unlikely that developing country partners would choose to expend much effort on persuasion, preferring to save their energy for disagreements that are more central to their interests. One might speculate that these reasons lead many international development partnerships to exclude mutual learning as an objective.

Of course, assumptions that developed country partners have little to learn from developing country partners or that it would be unethical to devote resources to such learning are not always valid. Developed country partners in particular should discuss the validity of these assumptions with developing country partners during program design rather than accepting them as true a-priori for the partnership in question.

Likewise, the assumption that it would be unethical to devote resources to learning from developing country partners is not universally valid. This assumption may be grounded on the premise that dedicating resources to learning from developing country partners has an unacceptably high opportunity cost given the

benefits that either or both partners would receive through those resources being dedicated elsewhere. In determining the ethics of dedicating resources to learning from developing country partners, any such opportunity costs ought to be weighed against the theoretical benefits that both partners may receive through the impacts of mutual learning on reducing power gradients and improving the ability of both partners to teach and to learn.

Power Presents Cognitive Barriers to Learning

Even when a partnership is designed with mutual learning as an objective, developed country partners face difficulties in learning due to the affects of their greater power. Literature on organizational learning (Brown, 1997; Fox, 1999; Lawrence et al., 2005) suggests that power dynamics are inseparable from learning processes, and evidence of the influences of power on learning processes has been found even when mutual learning processes are embraced as part of the organizational partnership (Babikwa, 2004a,b; Percy, 2005). There are two factors that make it difficult for more powerful actors to learn from those with less power, even when mutual learning is an explicit goal of the partnership. First, there is less incentive for powerful actors to change. Second, powerful actors have more ability to define the context in which meanings are negotiated, making it easier for them to overlook the viewpoints and values of the less powerful.

Powerful actors have less incentive to learn than those with less power because those in power have less incentive to change. Learning is “the ability to

negotiate new meanings" (Wenger, 2000), and there is less incentive for a powerful actor to negotiate new meanings when the current meanings imbedded in the status quo are acceptable to them. In general, powerful actors are more comfortable with the status quo than those with less power. This is especially true in international partnerships where less powerful, developing country partners may face a status quo in which their basic needs are not being met. As developed country partners almost always have their basic needs met under the status quo, they lack the developing country partners' urgent incentive to learn and to change.

The status quo also provides powerful actors with more influence over the people and forces that influence their lives, while less powerful actors have to rely more on their ability to control their own behaviors. Powerful actors who desire a change in the status quo are more able to influence others to learn and change, and may choose to exercise this influence rather than learning and changing their own behaviors. With less ability to influence others to make changes, less powerful actors who desire a change in the status quo are more likely to have to do the learning and changing themselves. Powerful actors, such as developed country partners in international partnerships, have less incentive to learn than less powerful actors due to a more tolerable status quo and more options for effecting change that do not involve doing the learning themselves.

Powerful actors also have trouble learning from less powerful actors because those with power are more likely to overlook or dismiss the viewpoints and values of the less powerful. This oversight need not be intentional, but rather

comes from the greater ability of the powerful to define the context in which new meanings are negotiated (Chambers, 1994; Brown, 1997; Fox, 1999). In defining the context, powerful actors may exclude viewpoints and values from discussion that are held by the less powerful, and which the powerful actors could learn from.

When this exclusion is inadvertent, the powerful actors might not even be aware of the potential for learning that they are missing. Alternatively, they may know that they are missing potential learning opportunities but be unable to articulate specifically what they are missing. The latter scenario would occur when the powerful actors recognize that there is value in the less powerful actors' body of knowledge taken as a whole, but have excluded or dismissed some of the values or viewpoints that are necessary for understanding and learning from that body of knowledge[10].

Power in Ordinary and Transformational Learning

In considering the impacts of learning on power in international development partnerships, it is important to distinguish between ordinary learning and transformational learning. Ordinary learning corresponds to "single loop" learning as articulated by Argyris (1977), and takes place when an actor receives feedback that helps it better realize its pre-existing objectives (Argyris, 1977).

[10] By contrast, less powerful actors have less ability to define the context of learning so as to exclude the viewpoints and values of powerful actors. As developing country partners are usually less powerful, they are therefore more likely to be aware of the viewpoints and values of the developed country partners.

Because pre-existing objectives in partnerships are heavily influenced by power, ordinary learning occurs in the context of existing power relations (Fox, 1999). One would therefore expect that ordinary learning has little impact on the balance of power between two unequal partners.

Transformational learning (Mezirow, 2000)[11] corresponds to "double loop" learning as articulated by Argyris (1977). Transformational learning takes place when an actor reflects on and changes their pre-existing values, objectives, and frames of reference. Transformational learning is:

> "the process by which we transform our taken-for-granted frames of reference (meaning perspectives, habits of mind, mind-sets) to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action. Transformative learning involves participation in constructive discourse to use the experiences of others to assess reasons justifying these assumptions, and making an action decision based on the resulting insight." – Mezirow, (2000:8)

Transformational learning is more far-reaching than ordinary learning because it changes actors' frames of reference and the power relations imbedded in them (Mezirow, 2000; Percy, 2005). One would therefore anticipate transformational learning to be less distorted by power than ordinary learning. Transformational learning would also be expected to have an impact on the balance

11 One important difference being that transformational learning as articulated by Mezirow is uni-directional, towards greater openness, while double loop learning is theoretically a-directional.

of power in between two unequal partners[12]. Indeed, Babikwa (2004a) describes incidents of transformational learning by the more powerful VEDCO staff from the less powerful subsistence farmers that altered the balance of power towards one of mutual empowerment for both partners.

Summary of Relevant Concepts

The history of the emergence of participatory approaches to agricultural extension suggests that it is necessary to empower farmers to teach as well as learn in order to achieve the broad, ambitious goals that have become associated with agricultural development. Empowerment is also recognized as a moral good in its own right. The observation that empowerment often emerges from higher forms of participation has led to calls for developing country partners to participate more fully in all aspects of international development partnerships.

At the same time, it is recognized that an unequal distribution of power is typically the starting point in partnerships between developed and developing country partners. As with learning by the more powerful agricultural extension workers from farmers within a country, learning by the more powerful developed country partners would be expected to shift the distribution of power towards greater equality, with positive implications for both partners. Development experts

[12] For a discussion of the applicability of Mezirow's theory across cultures, see Merriam and Ntseane (2008).

believe that developed country partners can learn from developing country partners, and that this experience can be empowering for both groups.

However, power is also theorized to make it difficult for those with more power to learn from those with less. Power may accomplish this affect by influencing the structure of the partnership, by reducing the incentive for partners with more power to learn, or by providing partners with power the ability to unduly influence the "negotiation of meanings" that takes place in a learning encounter. Each of these affects of power may lead both partners to unintentionally overlook opportunities for those with more power to learn from those with less. Promoting transformational learning, which changes frames of reference and potentially the power relationships embedded with in them, appears to be a promising step towards unlocking the potential for those with more power to learn from those with less.

By analyzing the experiences of farmers in the "Bridging the Gap" program, this study answers the following four research questions: First, to what extent and under what conditions do developed and developing country partners learn through such partnerships? Second, if learning occurs, to what extent and under what conditions is it transformational or ordinary? Third, how does power impact learning in these partnerships? Fourth, can transformational learning change the power relations between developed and developing country partners? It provides additional recommendations for encouraging learning by more powerful, US

farmers from less powerful, host-country farmers in the farmer exchanges that characterize the USAID Farmer-to-Farmer program.

CHAPTER III

THE "BRIDGING THE GAP" PROGRAM AS A CASE FOR ANALYZING LEARNING

The "Bridging the Gap" program is a partnership for agricultural development involving international exchanges of groups of farmers from Iowa and Uganda. This thesis describes the motivations to learn, specific instances of learning, and the impacts of learning on each group of farmers involved in the "Bridging the Gap" program, and examines the affects of learning on power in their partnership. In so doing, it reveals opportunities for increasing learning by more powerful partners in a manner that benefits both partners. These findings may be beneficial to future farmer-to-farmer programs.

The "Bridging the Gap" program is an appropriate case study to examine learning by developed and developing country actors for three reasons. First, the "Bridging the Gap" program was launched only two years before data was collected. This means that the experiences were fresh in the minds of the actors involved in the project. Second, the "Bridging the Gap" program is part of an ongoing development partnership and was carefully designed to encourage learning by Ugandan farmers. Third, the partners who designed the program are interested in the results of this research and were therefore willing to collaborate in making the research project a success.

The Development and Goals of the "Bridging the Gap" Program

The "Bridging the Gap" program is funded by USAID, and builds on a long-term development partnership between Volunteer Efforts for Development Concerns (VEDCO) and Iowa State University (ISU) to support agricultural development for sustainable livelihoods in Uganda. In 2004, VEDCO and ISU began a partnership that includes collaborative research between members of their staff to enhance the sustainability and profitability of Ugandan farmers. As a land grant university, ISU performs agricultural research and extension to farmers and communities in Iowa. It also works with communities around the world through its Global Extension Programs.

VEDCO was founded in 1986 as a program of Makerere University to improve the situation of smallholder farmers in central Uganda through the provision of agricultural inputs and extension. Since 2000, VEDCO has gone through two cycles of internal change designed to increase the power of Ugandan farmers to influence decision-making over the provision knowledge and other resources through agricultural extension (Babikwa, 2004a,b). The first cycle of the program was characterized by a one-way flow of knowledge from extension workers to farmers, and failed to increase the farmers' influence. By the second cycle, VEDCO extension workers shifted to a model where farmers were empowered to generate and share knowledge on their own, with a focus on transformative education (Babikwa, 2004a,b). The focus of the "Bridging the Gap"

program is on farmer-generated knowledge, and is therefore in line with the objectives of VEDCO's program.

The primary purpose of the "Bridging the Gap" program is to facilitate entrepreneurship among Ugandan women farmers as a means to community development. As a USAID funded farmer-to-farmer program, "Bridging the Gap" achieves this goal by sending Iowan farmer-volunteers to Uganda to teach and assist Ugandan farmers. Although the "Bridging the Gap" program was designed for Ugandan farmers to learn from Iowan farmers, learning by Iowan farmers is important for their ability to be good teachers and for their own personal and professional development as farmers. During its reauthorization of farmer-to-farmer programs in 2008, Congress recognized the importance of learning by American farmer-volunteers by listing cultural exchange as a primary benefit alongside economic development in the host country.

The "Bridging the Gap" program sends groups of three women farmers from Iowa to the Kamuli district of Uganda to "conduct farmer training and education with Ugandan women farmers" (Smith & Gonzalez, 2011). Iowan farmers spend between two and three hours with each of eight groups of Ugandan farmers. When this research took place, twelve Iowan farmers had visited 80 Ugandan farmers over the course of five exchanges. Iowan farmers' activities included training Ugandan farmers on improved maize quality, collaborative grain marketing, improved soybean production methods, and improved written farm record keeping

(Smith & Gonzalez, 2011). VEDCO staff supported the Ugandan farmers in between exchanges.

Agriculture in Kamuli District, Uganda

The "Bridging the Gap" program involves farmers in Namasagali and Butansi sub-districts of Kamuli district in Uganda. The Kamuli district is located in the central part of the country, in the Kyoga plains agricultural zone. The Kyoga plains average 1,215 mm of rain, which comes in two seasons. The main rainy season is March to May, with a secondary season from August to November. The bimodal rainfall pattern and favorable year-round temperatures allow for continuous cropping of non-seasonal crops and the production of two crops of annuals such as maize or beans. Soils in the Kyoga plains are considered poor to moderate (Kraybill & Kidoido, 2009). VEDCO staff observed that soils in Butansi and Namasagali are considered good and medium respectively in the Ugandan context, and emphasized the high variability of soil quality in both sub-districts.

Ugandan Farming Methods

Most farmers in Kamuli district are smallholders producing for subsistence. A 2005 survey found that 60% of the households surveyed in the Namasagali sub-district of Kamuli farmed between 0.02 and 0.198 hectares (Buyinza, 2009). About 75% of farmers surveyed in 2005 were determined to be farming at a low degree of intensification. Buyinza (2009) observed a variety of crops being cultivated in the

home-gardens; including coffee, banana, cassava, sweet potato, yams, ginger, edible beans, peas, and soybeans. Maize, sorghum, and rice are also commonly grown in Kamuli district (Kraybill & Kidoido, 2009). Most farm families in Kamuli district rely heavily on off-farm income, and only 24% of families in Kamuli district relied primarily on farming in 2005 (Buyinza, 2009).

The Ugandan farmers involved in "Bridging the Gap" differ from the typical Kamuli district farmer in several important ways. First, farmers were selected to participate in the program based on having achieved a basic level of food security. In the Ugandan context, food security means having enough calories available for each family member throughout the year. Symptoms of protein-energy malnourishment were observed among a few of the children of participating farmers, and farmers described health and nutrition as a challenge. Second, the farmers were selected based on their ability to transition, with assistance, from subsistence farming to farming as a business. This selection criterion favored families with larger land-holdings and greater dependency on agriculture than is the norm in Kamuli district. Farmers interviewed for this study owned between 0.2 and 4.05 hectares of land and 18 of the 28 farmers interviewed had no off-farm source of income.

Farmers involved in the "Bridging the Gap" program are organized into groups of around ten individuals. There were eighty farmers from eight groups involved in the program in 2011. Because the program focuses on building entrepreneurship among women farmers, 74 of the 80 program participants were

women. As is typical in Kamuli district, the farmers involved in the program farm almost entirely by hand. One group of farmers was given an ox-plough by the Iowan farmers involved in the "Bridging the Gap" project. Women in that group use the plough to break the land prior to planting. Planting and harvesting are done by hand, while weeding and hilling is done with a hand hoe. The most commonly grown crops among farmers participating in "Bridging the Gap" are maize, soybean, common bean, banana, and sweet potato; but coffee, cassava, grain amaranth, and yams are also grown. Intercropping is the norm among the farmers in the program, with one row of maize commonly alternating with three rows of beans or soybeans. Intercrops of maize and sweet potato, maize and cassava, sweet potato and cassava, and sweet potato and banana were also observed.

VEDCO staff and many of the Iowan farmers that were interviewed believe that soil fertility is declining in the Kamuli region. Farmers attempt to maintain soil fertility through applying manure to the soil before planting and through crop rotation and intercropping. Only one of the farmers interviewed for the study uses chemical fertilizer. Chemical fertilizer and composting are both promoted by VEDCO, but these techniques have been poorly received. Many farmers believe that chemical fertilizer is too expensive and composting requires too much labor for the returns they receive. None of the farmers spoke of using pesticides, though several of them had problems of insects on soybeans. VEDCO discourages the use of pesticides due to the cost and health concerns, and the farmers were advised to

manually pick the insects off of the affected plants. It is unlikely that the farmers will have the labor available to adequately control pests through this method.

In addition to the challenges of production, farmers in Kamuli district face infrastructural challenges, including poor quality of roads that makes marketing crops difficult and poor quality financial systems that make it difficult to save and to access credit. Electrical infrastructure is almost nonexistent in the rural areas where the program farmers live, and there is no piped water in these areas. Farmers are working to overcome these challenges through marketing grain collectively, using solar chargers for radio and cellphone charging, and taking advantage of savings groups and microcredit. Collective marketing of grain allows the farmers to command a better price, while enabling them to make use of larger trucks that can better navigate the poor road system. Savings groups help farmers to manage financial risk without needing to read and write and without paying the fees charged by the formal banking system. Microcredit programs help farmers to access loans, allowing them to invest in productive enterprises on and off the farm.

Ugandan Farmers' Attitudes Towards Farming

All of the Ugandan farmers interviewed described farming as "good". The main reason was their relative success in meeting their families' fundamental needs for food and education through their farms. Several farmers mentioned the difficult physical demands of their agricultural livelihood, qualifying their positive views of farming with statements about the difficulty of using the hand hoe, their

uncertainty about farming in their old age, and their unrealized desire for hired help. Despite their positive assessment of farming as a livelihood, not all farmers were consistently able to meet their families' basic needs. This was evident through observations that several of the farmers' children were visibly malnourished, and also through the farmers' expectations of improving family nutrition through the "Bridging the Gap" program.

The Ugandan farmers' positive outlook on their agricultural livelihoods is explained by three interrelated factors. First, the farmers' expectations of success are heavily influenced by the context of life in rural Kamuli district, where most people are unable to continuously provide optimal nutrition and education for their children. Even some VEDCO staff in Kamuli town must skip meals several times a month for lack of money, a reality that would classify them as "food insecure" in the United States. The high value placed on subsistence when evaluating farming as a livelihood is summed up succinctly by one of the six male Ugandan farmers involved in the program, who said: "If I wasn't a farmer I wouldn't be existing now".

A second explanation for the farmers' positive outlook on their agricultural livelihood is that, as a group, their livelihoods are more productive and more stable than the livelihoods of most people in rural Kamuli district. This is to be expected, as these farmers were selected for participation in the "Bridging the Gap" program based on their success in farming for subsistence and their potential to transition to market-oriented farming. Compared to casual farm laborers, informal shopkeepers, and other farmers who are less successful at subsistence agriculture, the farmers

involved in “Bridging the Gap” are relatively secure and prosperous. The third reason for the Ugandan farmers to view farming positively is that they believe their situation is improving through their involvement in the “Bridging the Gap” program.

Agriculture in Iowa, United States of America

The “Bridging the Gap” program involves farmers from across the state of Iowa. Iowa is located in the United States “Corn Belt”, and is known for its highly fertile soils, adequate rainfall, and a growing season sufficiently long to enable rain-fed cultivation of maize and soybean at high yields. Iowa is the top producer of maize and soybeans in the United States, producing 2,153 million bushels of maize and 496 million bushels of soybeans in 2007 (United States Department of Agriculture, 2010). Iowa is also the top producer of hogs and layer hens, producing 19 million hogs and 53 million layer hens in 2007 (United States Department of Agriculture, 2010)

Iowan Farming Methods

Most farmers in Iowa produce maize and soybeans for grain. Maize and soybeans are typically grown in rotation, with one or two years of maize followed by a year of soybeans. Farm size in Iowa is increasing and averaged 135 hectares in 2007 (United States Department of Agriculture, 2010). Conventional grain farming in Iowa relies on large inputs of fertilizer and pesticides and is highly mechanized.

Organic grain farming is an important niche market in Iowa, eschewing synthetic fertilizers and pesticides while retaining the high degree of mechanization found on conventional Iowa grain operations. Organic farms tend to have longer rotations, with a common organic rotation being maize-soybean-oats/alfalfa-alfalfa. Just over 90% of Iowa farmers are men, and the average age of the principal farm operator in Iowa is 56 years (United States Department of Agriculture, 2010).

In addition to the dominant cash-grain model of farming, Iowa has a small and growing number of farms producing fruits and vegetables for local consumption. In 2007, the local foods industry[13] in Iowa was valued at $16.5 million in direct sales and involved almost 3000 farms (Leopold Center for Sustainable Agriculture, 2011). Vegetable farming in Iowa is also highly mechanized, with most farmers owning or renting tractors for cultivation and mechanical pumps for irrigation. However, Iowa fruit and vegetable producers rely more on hand labor for weeding and harvesting than Iowa grain farmers. The temperate climate of Iowa restricts the growing season to five months without the aid of high tunnels and greenhouses, though high tunnels and greenhouses are becoming more prevalent over time. Despite the rapid growth of the local food industry in Iowa, Iowa fruit and vegetable farmers routinely meet local demand for

[13] "Local foods" is a contested term. The Leopold Center defines "local food" as "meat, poultry, eggs, dairy, fruit and vegetables, grains, herbs, honey, and nuts grown or raised in Iowa, and marketed for human consumption in Iowa and its neighboring states".

only three crops: sweetcorn, watermelon, and pumpkin (Leopold Center for Sustainable Agriculture, 2011).

The Iowan farmers participating in the "Bridging the Gap" program differ from the majority of Iowan farmers in two ways. First, all of the farmers selected to participate in the program as of 2012 were women[14]. Second, the farmers selected to participate were evenly divided between grain producers and vegetable producers. The over-representation of vegetable producers is the result of a deliberate decision to include more small-scale farmers in the exchange program in order to better facilitate learning by Ugandan farmers, who farm on a scale more similar to that of a vegetable farmer than a cash-grain farmer in Iowa.

Iowan Farmers' Attitudes Towards Farming

The Iowan farmers who were interviewed unanimously reported that they love farming as a livelihood. They describe farming as a vocation and a livelihood that they choose despite its challenges. Some Iowan farmers enjoy the high level of engagement and dedication that successful farming requires from them, while other Iowan farmers emphasized the challenges of successful farming in a manner that reinforced their sense of farming as a vocation:

> "I feel endlessly curious and appreciative, and sometimes frustrated and inadequate. It's exciting. It's beautiful. Yes, I'm proud to be a farmer." – Iowan Vegetable Farmer

[14] At least one male farmer was sent from Iowa in 2013, but this took place after data collection was completed so his experiences are not reflected here.

Iowan farmers saw farming as a livelihood that was good for the character development of their children. They invariably see their involvement in agriculture as a choice. One expresses it thus: “I love it. If you don’t love it, you don’t do it”.

Power and Participant Selection in the “Bridging the Gap” Program

USAID has a commitment to ensuring that farmer-to-farmer programs benefit women in host countries, but recognizes that most of its farmer-to-farmer programs disproportionately benefit men (Joslyn et al., 2012). The “Bridging the Gap” program differed from many farmer-to-farmer programs in that it focused almost exclusively on women farmers. Women in Uganda face significant barriers of discrimination in land ownership and access to agricultural inputs and extension, of socio-cultural norms that reduce their authority to make decisions within the family and the community, and of domestic and sexual violence (Opio, 2003; Nayenga, 2008; Wyrod, 2008). Ugandan women are primarily responsible for maintaining and caring for the family, a role that entails reproductive, productive, and community-managing domains as described by Moser (1989).

The combination of this triple-role and the significant barriers facing Ugandan women based on their gender leads women in Kamuli district to have a different set of needs than men, while also making it more difficult for women’s needs to be met. Moser (1989) divides gendered needs into practical needs and strategic needs. In this framework, practical gender needs are those that arise out

of the demands on or barriers facing women in a community, while strategic gender needs arise out of values such as equity between women and men[15].

ISU and VEDCO staff attempted to address the needs of Ugandan women through their choices of which Ugandan and which Iowan farmers would be allowed to participate in the "Bridging the Gap" program. The groups of Ugandan farmers selected to participate in the program were all made up of mostly women, and several had entirely female membership. This decision ensured that most of the direct beneficiaries of the "Bridging the Gap" program were women, while also reducing the opportunities for Ugandan men to influence the implementation of the program. The latter is important to the extent that it opens more space for women to develop and exercise their authority to make decisions, which is an important strategic need in their patriarchal society.

The Iowan farmers who were selected to participate in the exchanges were also almost exclusively women. The primary reason for choosing Iowan women to participate was the belief by ISU and VEDCO staff that Ugandan women would learn more from Iowan farmers who were women rather than men. Staff believed that Iowan women would be able to relate better to the gendered needs of Ugandan women because women farmers in Iowa are also tasked with a triple role, also face socio-cultural curbs on their authority to make decisions, and have historically been discriminated against in their ability to access land and farm services.

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[15] Women and men in a given community may each have a set of practical and strategic gender needs, but the patriarchal orientation of most cultures and of most development efforts leads women's gender needs to be more urgent.

Furthermore, exchanges in which all participants were women avoided the potential for gendered power relationships to develop between the farmers.

It is likely that the decision to involve primarily women farmers from both Iowa and Uganda reduced the initial power disparities between the two groups of farmers. However, the initial power disparity between the two groups was far from eliminated. Most of the Iowan farmers who participated in the program were white, and there is a great deal of privilege associated with lighter skin color in Kamuli.

Additionally, the Iowan farmers had greater access to most types of resources, including the resources of production (land, labor, capital), infrastructural resources (physical, financial, legal), and resources with which to acquire scientific and formal knowledge. The Iowan farmers entered the program as commercial farmers, while the Ugandans farmed largely for subsistence. The Iowan farmers' livelihoods were secure, and while the Ugandan farmers were considered food secure by Ugandan standards they would be considered food insecure by American standards. Finally, the program was designed such that the Iowan farmers traveled to Uganda as teachers while the Ugandan farmers remained in their communities as learners. These factors combined to provide the Iowan farmers with greater power relative to the Ugandan farmers, despite the fact that most farmers from both groups were women.

Data Collection

The primary method of data collection was semi-structured interviews with program staff and farmers who participated in the "Bridging the Gap" program. Interview protocols for both sets of farmers were designed to provide information about their backgrounds and farms, their expectations going into the "Bridging the Gap" program, their experiences participating in the program, what and how they taught and learned during the program, whether they felt they could have taught or learned more, and areas where the program could be improved. Interviews of Ugandan and Iowan farmers used similar questions in order to facilitate comparisons between groups.

Interview protocols were also developed for program staff at ISU and VEDCO. Interviews of program staff were designed to supplement the interviews of farmers by providing information on the process of designing the program, assess the staffs' perceptions of the success of the program, and explore their perspectives on what each group of farmers taught and learned through the program. Information from interviews of program staff was used during data analysis to check the internal validity of conclusions drawn from the farmer interviews.

The design of interview protocols for both farmers and staff was informed by conversations with program staff at ISU, who provided basic information about the goals, structure, and preliminary impacts of the program. The interview protocols were sent to program staff at both ISU and VEDCO for feedback prior to

interviewing. The study was approved by the institutional review board at ISU and by the Government of Uganda. Interview protocols are included in the Appendix.

Interviews of 28 Ugandan farmers from five farmer-groups were conducted in Uganda between 23 May and 20 June 2012[16]. Farmers were selected by VEDCO program staff to represent a range of ages, farm sizes, farmer experience levels, duration of involvement in the Bridging the Gap program, and success at implementing improved farming practices. Interviews took place on-farm and were completed in approximately 30 minutes. Translation services were provided by the 28 year-old, university educated MuSoga woman on VEDCO staff who was responsible for the farmer outreach and follow-up activities associated with the "Bridging the Gap" program. In addition to the farmers, three VEDCO staff members were interviewed in Uganda. Interviews with VEDCO staff were conducted in English without using a translator. Audio recordings were made and handwritten notes were taken for all interviews in Uganda.

Interviews of 1 Iowan farmer who was also on staff at ISU and 6 Iowan farmers who participated as volunteers took place in Iowa between 1 July and 20 October 2012[17]. The farmers selected interview locations that were convenient for them. Four selected public locations and three preferred to be interviewed on their farms. The duration of interviews of Iowan farmers ranged from 30 minutes to 1.5

[16] By May 2012, eight farmer-groups, consisting of 80 Ugandan farmers in total, had participated in the program.
[17] By July 2012, 12 Iowan farmers had participated in the program. Interviews were requested from all 12 of these farmers, of which seven consented and were interviewed.

hours. Audio recordings were made of four interviews in Iowa, and handwritten notes were taken for all seven.

Semi-structured interviews provided most of the data for this study. Additional information was acquired from informal conversations with ISU and VEDCO staff, printed materials prepared by Iowan farmers and ISU staff as part of the Bridging the Gap program, informal observations of farmers and program staff in Iowa and Uganda, and two informal conversations with groups of Ugandan farmers who were familiar with, but not involved in the Bridging the Gap program.

Data Analysis and Conceptual Framework

Grounded theory guided the analysis of data in this study. Grounded theory is a process by which conceptual categories are created and ultimately justified by the content of the data themselves, rather than being defined *a-priori* (Lincoln & Guba, 1985). Grounded theory relies on the use of coding and memo-writing to enable concepts to emerge from the researcher's interactions with the data themselves. While the data ultimately directed the conceptual categories developed from this study, a pure grounded theory approach was not pursued insofar as concepts of ordinary and transformational learning from the literature were used as an initial point of reference for data analysis.

Data analysis addressed four issues of importance to learning and power in international development partnerships. First, to what extent and under what conditions do developed and developing country partners learn through such

partnerships? Second, if learning occurs, to what extent and under what conditions is it transformational or ordinary? Third, how does power impact learning in these partnerships? Fourth, can transformational learning change the power relations between developed and developing country partners?

Instances of learning by Iowan and Ugandan farmers were categorized as ordinary-practical, ordinary-conceptual, transformational-personal, transformational-relational-local and transformational-relational-international (Table 2). For the purposes of this study, an exchange of information was categorized as ordinary learning if it supported the farmer to better achieve her existing goals, or as transformational learning if it led the farmer to modify her goals. Instances of ordinary learning were further categorized into practical and conceptual learning. Ordinary-practical learning occurred when a farmer adopted a farming practice that was taught to her by other farmers in the "Bridging the Gap" program. Ordinary-conceptual learning occurred when other farmers in the "Bridging the Gap" program influenced a farmer's thought patterns, leading her to adopt farming practices that were not specifically taught by other farmers in the program.

Instances of transformational learning were also further categorized into personal and relational learning. Instances of transformational-personal learning occurred when the experience of interacting with other farmers led a farmer to modify her identity or adopt new goals in her personal life or in her work as a farmer. Instances of transformational-relational learning occurred when the

experience of interacting with other farmers led a farmer to modify her identity or adopt new goals in her relationships with others. Instances of transformational-relational learning that modified farmers' relationships with their international peers present a subset of learning that is particularly significant for theories of power in international development programs.

Table 2: Comparison of Learning by Iowan and Ugandan Farmers

Type of Learning	**Iowan Farmers**	**Ugandan Farmers**
Ordinary - Practical		
Ordinary - Conceptual		
Transformational - Personal		
Transformational – Relational- Local		
Transformational – Relational - International		

CHAPTER IV

LEARNING BY FARMERS THROUGH THE "BRIDGING THE GAP" PROGRAM

This chapter focuses on learning by Ugandan and Iowan farmers through the "Bridging the Gap" program, with specific emphasis on research questions one and two: to what extent and under what conditions do developed and developing country partners learn through such partnerships, and if learning occurs, to what extent and under what conditions is it transformational or ordinary?

Both Iowan and Ugandan farmers learned through the "Bridging the Gap" program. Instances of learning were categorized as ordinary-practical, ordinary-conceptual, transformational-personal, transformational-relational-local, and transformational-relational-international. All five categories of learning took place among the group of Ugandan farmers and group of Iowan farmers. However, not every individual farmer learned across all five categories.

For the purposes of this study, an exchange of information was categorized as ordinary learning if it supported the farmer to better achieve her existing goals, or as transformational learning if it led the farmer to modify her goals. Ordinary-practical learning occurred when a farmer adopted a farming practice that was taught to her by other farmers in the "Bridging the Gap" program. Ordinary-conceptual learning occurred when other farmers in the "Bridging the Gap"

program influenced a farmer's thought patterns, leading her to adopt farming practices that were not specifically taught by other farmers in the program.

Transformational-personal learning occurred when the experience of interacting with other farmers led a farmer to adopt new goals in her personal life or in her work as a farmer. Instances of transformational-relational-local learning occurred when the experience of interacting with other farmers led a farmer to adopt new goals or take on new roles in her relationships with others in her own community. Transformational-relational-international learning occurred when the experience of interacting with other farmers led a farmer to adopt new goals or take on new roles in her relationships with their international peers. Transformational-relational-international learning is particularly significant of its theoretical potential to shift the balance of power in international development partnerships.

Learning by Ugandan Farmers

Learning by Ugandan farmers was primarily in the form of practical lessons to better enable them to implement their existing goals of feeding their families and making a living on their farms. While most of the learning by Ugandan farmers is classified as ordinary-practical learning under this study's conceptual framework, instances of ordinary-conceptual, transformational-personal, and transformational-relational learning also occurred.

Ordinary-Practical Learning by Ugandan Farmers

Ugandan farmers' ordinary-practical learning led them to implement six new farming practices across the four learning objectives of the "Bridging the Gap" program[18]. These practices are: (1) improving grain quality through using tarps and bicycle shellers to dry and shell maize, (2) gaining better prices through marketing maize through their farmer groups, (3) planting soybeans and maize in rows to enable easier weeding and improve yields, (4) achieving better stand counts and improving yields by planting high quality seed and running germination tests, (5) raising soybean production through increasing the acreage planted, applying innoculants, and planting improved varieties, and (6) improving their control over their farms through farm recordkeeping. Ugandan farmers describe these new farming practices as extremely beneficial to them, helping them to reach their existing goals of feeding and educating their children and making a decent living off of their farms.

Improving Grain Quality

Ugandan farmers were motivated to implement the techniques to improve grain quality by the increases in prices that higher quality grain could command. Several of the Ugandan farmers said that they benefit enough from the tarps that they were given as part of the program they will purchase new tarps themselves

[18] The four learning objectives were improving grain quality, collectively marketing grain, increasing production, and farm recordkeeping.

when the original tarps wear out. In addition to encouraging the Ugandan farmers to use tarps and shellers, the Iowan farmers went with VEDCO staff to several grain buyers to determine the price premium that is paid for quality grain. The Iowan farmers attempted to convince some of the grain buyers to publicize a higher price for good quality grain, rather than deducting from the listed price for poor quality. This effort was based on their belief that Ugandan farmers would be more likely to increase grain quality in response to the incentive of a higher listed price.

Collectively Marketing Grain

The "Bridging the Gap" program emphasized collective marketing of maize and later of soybeans through organized farmer-groups. Most farmers are benefitting from this new practice. Indeed, the premium prices and new markets that collective marketing enables farmers to receive was a common motivation for new farmers to join the farmer groups involved in the "Bridging the Gap" program. Farmers who are not members of the "Bridging the Gap" program's farmer groups also desire to take advantage of collaborative marketing if possible.

Despite the overall success of the collective marketing process, some individual farmers were unable to harvest enough to participate in the group marketing. Several farmers harvested less than they had expected due to illness in the family or poor weather. These farmers expected to be able to take advantage of collective marketing for future harvests.

Some farmer groups had trouble getting their product to the markets. The breakdowns in collective marketing have at times led to mistrust among members. One farmer openly speculated that her group leader pocketed the difference between the price a soybean buyer originally proposed and what was eventually paid out. VEDCO staff work with the farmer groups to facilitate collective marketing, and do not believe that there has been misappropriation of funds by group leaders.

To facilitate collective marketing and to build trust and cooperation among the members of the farmer groups, VEDCO staff and the Iowan farmers have encouraged each group to develop a written constitution. The Iowan farmers were impressed by the constitutions that the Ugandan farmer-groups developed:

> "We were the first group over there so we talked a lot about collective marketing, how they were going to structure the groups, would they include the men, and where would the money go if the men were included? And I was impressed because the second time we went over there, most of the groups had a structure, and an agreement, and I don't know if that was at the encouragement of VEDCO... [The agreements are] impressive, because I have a legal background, and I think if I didn't know anything I'd be kind of at a loss because you can't just go to the Internet there and copy one down. One in particular I saw, and I don't know whose idea it was, but it provides for a kind of life insurance in a way. So if someone's husband dies, or child, or what have you; everyone pitches in and gives them a little bit. You know, I wouldn't have thought to put that in there!" – Iowa Grain Farmer

Increasing Production

The Ugandan farmers also learned about and implemented new agronomic practices, the most popular of which was planting maize and soybeans in rows with fixed spacing between plants. The main benefit that farmers found from planting in

rows was the relative ease of manual weeding. Some farmers also noticed increases in yields when planting in rows, though it is unclear how much of this difference is attributable to planting in rows independent of concurrent agronomic changes, such as using improved varieties of soybeans, planting higher quality seed, or inoculating fields with nitrogen fixing bacteria.

Another agronomic practice that Ugandan farmers learned from Iowan farmers through was increasing the quality of seed they planted through seed sorting and the use of germination tests prior to planting. Many of the Ugandan farmers mentioned that they now save their best quality seed for planting. Iowan farmers taught Ugandan farmers how to run germination tests using locally available materials and to increase their planting densities if the tests showed poor germination.

VEDCO staff said that some Ugandan farmers continue to run germination tests, but only one of the farmers brought it up during the interview. This may indicate that relatively few farmers continue to conduct germination tests, but it could also simply be a result of the farmers choosing to emphasize other practices that they learned through the program during the interviews.

Ugandan farmers were further encouraged to increase their production of soybeans through increasing the acreage planted, applying inoculants, and planting improved varieties. VEDCO has separate, pre-existing extension programs promoting the use of inoculum to promote biological nitrogen fixation in soybean fields and encouraging the planting of improved varieties of soybeans. The

development of inoculants for biological nitrogen fixation and of improved varieties of soybeans is led by Uganda's Makerere University, which has a long partnership with VEDCO to introduce, promote, and evaluate these technologies in rural communities. The Iowan farmers supported VEDCO's efforts in this area by encouraging the Ugandan farmers to set up on-farm experiments to test the use of inoculum and the new soybean varieties, and by reinforcing VEDCO's communications about the benefits and proper use of inoculum.

Almost all of the Ugandan farmers involved in the "Bridging the Gap" program have planted improved soybean seeds, as these are distributed by VEDCO to area farmers at the beginning of each planting season. Some farmers believed that the improved soybean seeds helped increase their harvests, while other farmers reported problems with their soybean harvests that they attributed to the improved seeds. VEDCO staff attributes this to the large variability of soils and microclimates in Kamuli district, which makes it unlikely that any one variety of improved soybeans will work on all farms.

Some of the Ugandan farmers were able to increase their acreage of soybeans as was recommended by the program, but others found this difficult. The farmers who were unable to increase soybean acreage attributed this to limitations of land or labor, which they felt unable to overcome due to their lack of capital. This is somewhat surprising, as VEDCO offers low interest micro-loans to facilitate access to capital among farmers in Kamuli District.

There are at least two explanations for the farmers' reluctance to use these loans to access capital for additional land or hired labor. First, VEDCO may not be adequately informing farmers about this micro-loan program, or may be informing farmers in a way that is not convincing them of its benefits. Second, the VEDCO micro-loan program may not provide favorable enough terms to convince the farmers to accept the additional risk associated with a loan. The farmers who participate in the "Bridging the Gap" program are among the most successful in Kamuli and many have longstanding relationships with VEDCO. These farmers' claims of difficulty accessing capital should lead VEDCO staff to investigate possibilities for improving the promotion or design of their micro-loan program.

The increases in soybean production made possible through these new agronomic practices led many Ugandan farmers to desire additional support for adding value to their harvest. One group of women found a business opportunity in mixing their soybeans with maize and other grains to produce baby porridge mix to sell to neighbors and at roadside stands. They were encouraged in this activity by VEDCO staff, and credit the "Bridging the Gap" program with helping them produce enough soybeans to make the business possible. However, Ugandan farmers who expected direct assistance in adding value to their soybean crops generally did not have this expectation met:

> "I was expecting development though helping me to learn to process soy and maybe giving me equipment to process soy because one of my friends got in contact with some Whites who helped provide her machines to make mango juice. They mentioned a machine for making soy oil and promised us

> chickens to eat small, bad soybeans, but these haven't arrived yet." – Ugandan Farmer and Group Leader

Most of the Ugandan farmers remembered talking with the Iowan farmers about a machine to make cooking oil from soybeans. There was some disagreement about whether the machine had been promised, and whether there were conditions to be met before it would be delivered. Ugandan farmers see value addition as the next step in the economic development of their area, and believe that VEDCO should focus on that.

Farm Recordkeeping

The Ugandan farmers enthusiastically embraced farm recordkeeping as a result of the visits of the Iowan farmers and their participation in the "Bridging the Gap" program. Ugandan farmers described farm recordkeeping as giving them more control over their own farming decisions, and as helping them measure their costs and profits across fields and seasons. The Ugandan farmers told the Iowan farmers that recordkeeping also helped them manage and evaluate different intercropping combinations on their farms. Because the Ugandan farmers had already organized into groups for collective marketing, those who were illiterate were able to rely on their group leaders to help them keep farm records.

Ordinary-Conceptual Learning by Ugandan Farmers

Ugandan farmers also learned on an ordinary-conceptual level, by initially extending the concept of collective marketing to include soybeans as well as maize. The emphasis that "Bridging the Gap" program placed on collective marketing of maize led some of the farmer groups to ask to be able to market soybeans collectively as well. This was initially an instance of ordinary-conceptual learning[19], as the Ugandan farmers had embraced the concept of collective marketing in the context of maize and extended it to the context of soybeans:

> "When we went there, we thought they'd do maize only. They ran with soy as well. Soy was an afterthought, but it exploded into a big part of the program." – ISU Staff

Transformational-Personal Learning by Ugandan Farmers

Ugandan farmers learned on a transformational-personal level as well, especially by viewing themselves as more competent farmers and businesswomen. These transformational effects of the program for the Ugandan farmers were largely an outgrowth of the improved farming practices that they learned from the Iowan farmers. Their experiences of keeping farm records and of receiving higher market prices through group marketing and improved grain quality led Ugandan farmers to believe in their own potential as businesspeople. Many farmers described this as changing their lives:

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[19] Once this idea was accepted and incorporated into the curriculum, farmers learned about collective marketing of soybeans along with collective marketing of maize. In these cases, collective marketing of soybeans would be better classified as an instance of ordinary-practical learning.

> "I used to wonder why people in United States have good grain quality and wondered how I could do that too. Now that I know how they keep grain clean, I've started doing it and getting a good price. What they've taught me - it's changed my life. We used not to know the importance of soy. Now we know if you grow soy, it is almost double the price of maize in the market." – Male Ugandan Farmer

Ugandan farmers often commented that they have more control over their lives and livelihoods as a result of the program. For some Ugandan farmers, their increased levels of control led them to implement farming practices that VEDCO had previously introduced but which they had not embraced in the past. Three farmers began experimenting with growing grain amaranth and vegetables after speaking with Iowan farmers.

The desirability of growing amaranth and vegetables were mentioned in conversations with the Iowan farmers, but this was not taught as part of the "Bridging the Gap" program. Previous programming by VEDCO in partnership with ISU's Center for Sustainable Rural Livelihoods introduced many of the farmers to grain amaranth and vegetable gardening, but these three farmers clearly considered their interactions with the Iowan farmers as inspiring them to begin implementing these practices on their farms.

These farmers' implementation of amaranth and vegetable gardening is most likely the result of the "Bridging the Gap" program making them feel more competent as farmers, a form of transformational-personal learning. These Ugandan farmers experimented with growing more nutritious crops because they saw themselves as having more control over their lives and their farming as a result

of the program, leading them to set more expansive goals regarding household nutrition than they would have considered achievable beforehand.

Transformational-Relational-Local Learning by Ugandan Farmers

As a result of the "Bridging the Gap" program, Ugandan farmers began acting and viewing themselves as teachers in their communities. All of the Ugandan farmers shared the improved farming practices they learned from the Iowan farmers with their friends and neighbors. Some of the Ugandan farmers have become recognized as community leaders due to their participation in the "Bridging the Gap" program.

The Ugandan farmers' status as community leaders is caused by the improvements in their livelihoods as a result of the new farming practices that were taught in the "Bridging the Gap" program, but also in part by their association with White people. In Kamuli District, White people are seen as wealthy and successful experts, and are sometimes described in "superhuman" terms as having the solutions to every problem facing Ugandan farmers. The community sees the farmers in the program as having privileged access to White people and to their wealth and expertise.

The value of the "Bridging the Gap" program and of the prestige of participating in it is recognized both by the farmers who are part of it and by those who are not. During a discussion with a group of farmers who are not involved in the "Bridging the Gap" program, it quickly became clear that they want to join:

> "We want to be part of the farmer to farmer program and access soybean seed, because our land is fertile and our group is cooperative. Only one person ever talked to the farmer-to-farmer people from this group, but they learnt so many things about post harvest handling and record keeping. We are far away from them, which is why only one person went to learn. We feel different from the farmer-to-farmer group and want badly to join the program." – Leader, Unaffiliated Farmer Group

The "Bridging the Gap" program provides a new source of power to participating farmers relative to other farmers in their communities. In addition to their new influence on other farmers as community leaders and teachers, a few farmers also noticed a change in their relationships with VEDCO staff as a result of the "Bridging the Gap" program:

> "I am happy with the way [the "Bridging the Gap" program] is because VEDCO staff are always coming to monitor what I'm doing and to teach me something. Before, nobody would come and teach." – Ugandan Farmer

VEDCO staff also noticed that several of the Ugandan farmers became more assertive in their interactions with VEDCO extension workers. In particular, these farmers would ask VEDCO extension workers to come back another day if the farmer had too much fieldwork to do on the day that the extension worker visited. VEDCO staff describes this new assertiveness as beginning before the "Bridging the Gap" program but intensifying because of it. More assertive behavior on the part of some of the farmers is consistent with their experiences of feeling more powerful and in control as a result of the "Bridging the Gap" program, and with their new status as teachers and leaders in their own right.

Transformational-Relational-International Learning by Ugandan Farmers

Ugandan farmers developed new understandings of Americans through their interactions with Iowan farmers in the Bridging the Gap program. Most Ugandan farmers claimed that they hadn't thought much about the United States before the program, but that they now view Americans as good people. This claim is odd, as most of these farmers had worked with VEDCO in the past and would have met or heard about the ISU professors and students who work with VEDCO through its partnership with the Center for Sustainable Rural Livelihoods (CSRL). One possible explanation is that the Ugandan farmers felt a greater connection with the Iowans as fellow women farmers than they experienced with the professors and students they had previously met, and that this connection led them to think more about the United States than they had previously.

Some Ugandan farmers didn't think that they had anything they could teach the Iowan farmers, while other Ugandan farmers talked about lessons they had already taught them or wished to teach them in the future:

> "[The Iowan farmers] learned how I was drying my beans, because I hang them up. They'd never seen anyone do that. They learned how I was charging phones on solar panels. They learned how to make the mats [out of reeds], and also about new fruits and cassava in my garden… I learned that Whites are farmers, but I got to learn they're also farmers like us." - Uganda Farmer (Group Leader)

Learning by Iowan Farmers

Despite it not being a primary program objective, Iowan farmers learned from Ugandan farmers through the "Bridging the Gap" program. Iowan farmers' learning was primarily transformational-personal, but instances of transformational-relational, ordinary-practical, and ordinary-conceptual learning also took place. The Iowan farmers did not see the new farming practices that they implemented as life changing or as critical to the success of their farms. This is not surprising given that their livelihoods were secure before the program began. Many Iowan farmers felt that their experiences in Uganda improved them as people, as farmers, and as global citizens.

Ordinary-Practical Learning by Iowan Farmers

Ordinary-practical learning took place among Iowan farmers as a result of the Bridging the Gap program. However, there were few instances of ordinary-practical learning that led Iowan farmers to change how they farmed[20]. One Iowan grain farmer applied Ugandan farming practices to her personal, non-commercial vegetable garden:

> "The Ugandan women, as you likely know, call their fields 'gardens' and much of what I learned is what I would call gardening rather than farming. We were able to observe Ugandan gardening practices and I am evaluating some of them at home in my vegetable garden… I made some cultural gardening changes in my traditional Northern [temperate climate] garden plantings. Most seed packets say to plant vegetables in full sun. I noticed

[20] All of the women who were interviewed were primarily or jointly responsible for making management decisions on their farms.

> that many vegetables that looked similar to our "cool season" vegetables like lettuce, spinach, arugula and other "greens", carrots, onions, etc. were grown in partial shade in Uganda - either under constructed or "bio" structures such as trees or alongside a hut. I planted some seeds in big pots this summer and it has worked well to move them around to receive filtered sunlight and keep them out of the mid-day heat. They don't bolt as quickly and continue to grow longer. The traditionally planted direct seeded crops never emerged after planting because it was too dry. But the ones in pots have provided salad all summer long." – Iowan Grain Farmer

An Iowan vegetable farmer experimented on her farm with the Ugandan methods of growing sweet potatoes:

> "It was funny - all the sweet potatoes they grow. I've been trying so long to grow them. It's been fun to try to grow them based on how they grow over there. I was fascinated by seeing them at all stages of development. I'd love to talk to them [the Ugandan farmers] more about how they manage to have a crop of sweet potatoes." – Iowan Vegetable Farmer

Knowledge of sweet potato and vegetable farming were among the lessons most commonly identified by Ugandan farmers when asked what farming practices the Iowan farmers could learn from them. Some Ugandan farmers recognized that the large scale and high mechanization of Iowan grain farming methods present significant barriers to successful adaptation of Ugandan knowledge to Iowan grain farming systems, while these differences are less pronounced between the two vegetable farming systems. Furthermore, the positioning of Iowan farmers as expert teachers of improved grain farming practices led some Ugandan farmers to believe that they had nothing valuable to teach the Iowans about grain farming. This belief may have been less pronounced in the area of vegetable farming because

the Iowan farmers didn't teach the Ugandan farmers about vegetable farming through the program.

Ordinary-Conceptual Learning by Iowan Farmers

Iowan farmers learned from Ugandan farmers on the ordinary-conceptual level as well as on the ordinary-practical level. Ordinary-conceptual learning through the "Bridging the Gap" program led several Iowan farmers to think more about the importance of collaboration. The concepts of stewardship and farming with fewer inputs led one Iowan farmer to reduce her use of pesticides, while another planted a field to varieties of soybeans that were not genetically modified and patented so that she could save some of her seeds for future years. These are not instances of ordinary-practical learning, as the Iowan farmers most likely knew about these agricultural practices before traveling to Uganda. Instead, the emotional impacts of their interactions with Ugandan farmers led them to think more about the *concept* of stewardship, which resulted in their decisions to adopt these specific agricultural practices.

Both grain and vegetable farmers thought more about the importance of using agricultural inputs carefully after speaking with the Ugandan farmers. This did not necessarily result in any changes in agricultural practices among the Iowan vegetable farmers, who already placed a high value on low-input methods of farming. One of the Iowan grain farmers extended and applied the concepts of the

Ugandan farmers' low-input agriculture to the conditions on her own farm, leading her to reduce her use of pesticides:

> "You know I think twice: 'Do I really need to spray? Do I really have to do this?' You think rather than just go ahead and call the guy and have him spray, you think 'Are these weeds something I can live with? Am I just spraying to make it look better?' And I've always done it like that, if there's a few weeds in my field it doesn't bother me if my neighbors care if it doesn't hurt the yield enough that it's not going to be cost effective. I think about that a little bit more. I also think more about how I could get more out of the land. But I'm not going to go to the hoe!" – Iowan Grain Farmer

Interactions with the Ugandan farmers led another Iowan grain farmer to plant a section of her farm to varieties of soybeans that she could legally save for replanting:

> "They save their own seed, which is readily observable in the corn fields. We used to save our own soybean seed before 'Roundup Ready'. It made me rethink what convenience and advertising might be costing our operation. I planted some non-GMO seed soybeans this year." – Iowan Grain Farmer

Both grain and vegetable farmers thought more about the importance of collaboration as a result of speaking with Ugandan farmers during the "Bridging the Gap program:

> "I think that something I always take away from my visits to Africa is just how well the community works together. How no one is looking out for their own best interest but everyone is looking out for the best interest of everyone. I think that's something we lose here in America. They look out for each other. I mean even a child crossing the street. If the mother isn't around there's going to be 10 women running out into the street to get that child. It's just everyone's looking out for everyone else." – Iowan Vegetable Farmer

This is not strictly an instance of ordinary-conceptual learning in so far as Iowan farmers did not identify any specific changes in practice. However, collaboration was identified by all parties to the "Bridging the Gap" program as an area of high potential for Iowan farmers to learn from Ugandan farmers. There is a slight possibility that Iowan farmers will make changes in the future based on the collaboration that they observed among the Ugandan farmers. Such changes would almost certainly be instances of ordinary-conceptual learning, as the Iowan farmers would have to adapt the concepts of collaboration that they learned from the Ugandan farmers to the context of life and farming in Iowa.

Speaking to the current nature of collaboration among farmers in Iowa, one Iowan vegetable farmer recognized the support that she receives from existing networks, such as Practical Farmers of Iowa and the Women, Food and Agriculture Network. Both of these are statewide networks that provide support largely online and through periodic face-to-face meetings. She believes that the Ugandan farmers could help teach Iowans how to build these social support networks on the level of a town, county, or similar geographically bounded community. Several Ugandan farmers also recognized their methods of collaboration as an area that Iowan farmers might learn from, as did VEDCO staff. One of the "Bridging the Gap" program leaders for ISU suggested that some of the models of collaboration used by farmers in Uganda could provide insights for ISU extension staff that are working to promote cooperative agreements among farmers in Iowa, particularly machinery sharing and communal marketing among smaller or beginning farmers.

While the potential for Iowan farmers to learn about collaboration from Ugandan farmers was recognized on all sides, the Iowan farmers were unable to describe any specific changes that they had made as a result of speaking about collaboration with the Ugandan farmers. This is not surprising, as the Iowan farmers were limited by large cultural and logistical barriers to collaboration in Iowa, insufficient time to learn from the Ugandan farmers, and the distorting affects that their greater power relative to the Ugandan farmers had on their ability to learn from the Ugandans.

The Iowan farmers would have had difficulty implementing the Ugandan farmers' models of cooperation for the simple reason that they did not spend enough time talking about the details of these models with the Ugandan farmers and VEDCO staff. The lack of time for Iowan farmers to learn from Ugandan farmers was a recurring theme that was brought up by both groups. It is likely that this lack of time was caused in part by the emphasis that the program placed on the Iowan farmers teaching the Ugandan farmers. This emphasis led the Iowan farmers to focus on teaching, and the Ugandan farmers to focus on learning. The valuing of formal and scientific knowledge over traditional knowledge presented a further barrier to Iowan farmers learning about collaboration from the Ugandan farmers, whose knowledge of collaboration was neither formal nor scientific.

Another difficulty that the Iowan farmers would face in implementing collaborations in their home communities is the more individualistic culture of the United States and the lack of economic pressures on Iowan farmers to collaborate.

Without a strong, immediate economic incentive to collaborate, individual farmers must weigh any efforts to initiate and maintain collaborations against competing uses of their time and money. Any Iowan farmer attempting to adapt the Ugandan farmers' methods of collaboration to her home community would have to expend a large amount of time and effort - and possibly money - discovering which changes would need to be made to the Ugandan farmers' model, convincing other Iowan farmers to participate, and then guiding the emerging collaboration. This problem is made more significant because Ugandan farmers' model of collaboration relies heavily on geographic proximity. As the Iowan farmers who participated in the "Bridging the Gap" program were from geographically disparate communities, they would be unable to form a place-based nucleus of cooperation with other farmers who had also been to Uganda through the program.

Given the large amount of time and effort that would be required for Iowan farmers to take advantage of what they could learn about collaboration from Ugandan farmers, the successful implementation of these lessons is likely to require active facilitation by a large institution such as ISU.

Transformational-Personal Learning by Iowan Farmers

As a result of speaking with the Ugandan farmers, the Iowan farmers had an increased appreciation for the positive aspects of living and farming in Iowa and a broader perspective of what they find important in life. The three Iowan farmers who had lived in Africa before found affirmation of the broader perspectives on life

they had learned on previous travels. For some Iowan farmers, these new or reaffirmed perspectives led to specific lifestyle changes. One farmer now eats less meat, two have made gardening for home consumption a personal goal, and another has reduced her consumer purchases and begun sourcing more of her own food from her farm. This transformational-personal learning was highly valued by the Iowan farmers, most of whom saw it as the biggest benefit of the program to them.

Most Iowan farmers described their interactions with Ugandan farmers as making them more grateful people:

> "Sometimes when I think about it, I think about how blessed we are and how I can be so unhappy with so much and how that's crazy… When we were there they were waiting to plant and it was so dry, and now we're here and it's so dry. And I've been walking out in my cornfield and it's all tasseled out, but there are no ears. So I think if I get crop failure, I can still eat. I can still send my kids to a Christian school. If I have a car break down I can fix it. In the big scheme of things with crop failures, I only get so many crops but still that's not a deal-breaker for me. For them it means they don't get malaria medication or can't send their daughter to school. It makes my concerns seem so trivial. It also makes me want to give and give… I feel like my world has gotten smaller. Now I have brothers and sisters in Uganda." – Iowan Grain Farmer

> "It strikes me that in multiple conversations, that despite all the adversities, they're hopeful. I think a lot of us would have a hard time being so positive. The women were absolutely gracious towards us, so generous and gracious. It's interesting to see women being so willing to share who, depending on what growing season they have, may or may not have enough food to feed their families. Here, people help out their neighbors, but not total strangers in the same way. We were total strangers. A trip like that renewed my faith in humankind and that there are people out there who are more keyed in to the basics." – Iowan Vegetable Farmer

Some Iowan farmers described the transformational impact of their interactions with the Ugandan farmers in terms of changing and broadening their own concept of what it means to be a farmer:

> "I think about farming more worldly now. I think about how many people I really am feeding out there in the world. I saw all the NGOs over there and I thought that could be some of my corn in there; that could be some of my soybeans. Because so much of the world, which rural Iowa doesn't realize I don't think, so much of the world is farmed by 2-4 acres just to feed their family and get by. It's not about thousands and thousands of acres. It's about ten acres. People don't get that. Farmers here don't get that." - Iowan Grain Farmer

Several of the Iowan farmers found that their conversations with the Ugandan farmers increased their own appreciation and gratitude for their ability to farm as a choice rather than out of necessity. For other Iowan farmers, the conversations with farmers in Uganda had the effect of affirming and reinforcing the way they thought about farming before the exchanges.

At times, interactions with the Ugandan farmers translated to specific changes in the Iowans farmers' lives. One Iowan farmer reduced her meat consumption as a result of participating in the Bridging the Gap program. She described the Ugandan farmers as teaching her to eat more mindfully, saying that "We should be going their way and they should move our way… I try to eat more beans and less meat."

Several Iowan farmers were moved by the thought and effort that the Ugandan farmers put into feeding their families from their farms. The interactions with Ugandan farmers led two of the Iowan farmers to take an active interest in

gardening for home consumption, while a third reduced her consumer purchases and expanded the amount of food she sourced for herself off of her own farm:

> “I find myself not even - like if I walk in the store - not even having the interest, and I walk back out. I haven’t bought anything [since returning from Uganda], and I pretty much can't see any personal needs anymore. I've never really had many, but now I'm indifferent. I still shop for food but I'm eating more of what I have here [on my farm]." – Iowan Vegetable Farmer

Transformational-Relational-Local Learning by Iowan Farmers

Many Iowan farmers shared their experiences with Ugandan farmers and the “Bridging the Gap” program with people in their home communities. This process of sharing led some Iowan farmers to assume new or expanded roles as teachers or as citizen ambassadors. The three Iowan farmers who had traveled to Africa before the program noticed less of a change in their community roles.

Several Iowan farmers described their role as becoming more of a teacher or citizen-ambassador to people in their communities:

> "I give presentations and talk to people about it, more one on one. It changed my conversations, what I share with people. It changed and broadened my perspective but I don't even think about it. I had people from five countries, including people from Pakistan, Iran, and Afghanistan on my farm - people who are equivalent to extension or agribusiness workers. My conversation with them was impacted by Uganda." – Iowan Vegetable Farmer

One Iowan farmer who strongly dislikes public speaking was inspired to join Toastmasters, a public-speaking group, by her conversations with the farmers in Uganda and her desire to share what she learned there. Another Iowan farmer has noticed that her family life has been impacted by her experiences in Uganda:

> "It broadened my horizons in general… We'll be doing something [as a family] and somebody will say 'Do you think anybody in Africa gets to do something like this?' or somebody will be complaining about something and someone will say 'I don't think in Africa they'd be complaining about this'... The last day that we were there we did some volunteering at an orphanage and so they send us their newsletter and I share that with my kids." – Iowan Grain Farmer

Not every Iowan farmer experienced a transformation in her role in the community. As with transformations in personal life, transformations in community life were felt mostly by the Iowan farmers who had not previously traveled to Africa. The Iowan farmers who had been to Africa before did not find their role in the community to be much different as a result of the "Bridging the Gap" program.

Transformational-Relational-International Learning by Iowan Farmers

The "Bridging the Gap" program taught Iowan farmers to think differently about Ugandan farmers in general and about their relationships with the Ugandan farmers who were involved in the program. The Iowan farmers noticed that they shared common ground with the Ugandan farmers on the values of kindness and hard work. The Iowa farmers' exposure to the Ugandan farmers' culture led them to have a greater openness and appreciation for cultural diversity, even as some of them struggled with the differences in gender dynamics that they witnessed in Uganda. Furthermore, the Iowan farmers universally recognized that the Ugandan farmers could teach them things of value.

The Iowan farmers noticed they had many things in common with the Ugandan farmers, both on values of family and work and as farmers:

> “You know, I can't even remember who it was with, but we were talking about very poor conditions they had for growing, and it was almost like talking with a bunch of farmers here. You know, when they lament about the weather or what have you. And I remember we were going ‘Oh, so sad’ because she wasn't able to return - they were given so many kilograms of soy and then had to give back some and she wasn't able to return that... And she put her hand on our shoulder and said ‘It's okay, we're going to do better next year.’ And we almost got kind of a sense of hopelessness and they were like ‘No, we can do this, we're going to improve.’ And it's like ‘Yeah girl, go!’" – Iowan Grain Farmer

All of the Iowan farmers were impacted by their experiences learning about and working with people of another culture. One Iowan farmer who had previously traveled to Ghana and Kenya was reminded of the value she places on experiencing a diversity of cultures, saying: “Every time I go there it opens my eyes. It's not just one blanket culture over there."

Interacting with the Ugandan farmers led some of the Iowan farmers to grow in their own personal ability to navigate other cultures:

> "I think that I'm far more open to other people and other cultures, not as closed minded. What really, really amazed me was being over there I never really felt uncomfortable and I thought I would. Because let's just say, I'm not around a whole lot of black people - ever. I just am not - especially from a different country. I didn't know what to do. And even though you get looked at and certainly get treated far better - what do they call us, 'Mzungu'? - I never felt uncomfortable. I never felt unsafe, even when a drunk was talking with us. But that's what really surprised me." – Iowan Grain Farmer

One aspect of the Ugandan farmers' culture that some of the Iowan farmers struggled with was the inequality they observed between women and men, which several compared to their experiences of gender roles when they were growing up in rural Iowa. Some of the Iowan farmers thought a great deal about how their decisions as farmer-extension workers through the "Bridging the Gap" program interacted with the gender dynamics that they observed while in Uganda. One observed that the men became more involved in the farmer group that was given an ox plough. She had mixed feelings about this, as she believed both that Ugandan men should be involved in the program and that too much involvement by men in decision-making would reduce the benefits of the program to Ugandan women.

The Iowan farmers who were interviewed described their attempts to respect the cultural autonomy of the Ugandan farmers and to avoid using their position of power to force their own perspectives of appropriate gender-relations on the Ugandans:

> "When I thought about how some of the [Ugandan] men have more than one wife and we don't, I thought 'I'm not going over there to change the world, I'm going there to help these women.' So I thought- 'I'm not going there to change their culture. If they want to, they'll do it, but it's going to be their way.'" – Iowan Grain Farmer

It was not a program objective for Iowan farmers to learn lessons from Ugandan farmers that would be applicable in Iowa, and this was not a major expectation of Iowan farmers at the onset of the project. Nevertheless, the interactions with Ugandan farmers through the program led every Iowan farmer to

realize that the Ugandan farmers could teach them valuable lessons. Iowan vegetable farmers in particular believed that the Ugandan farmers could teach them specific farming practices that would be transferrable back to Iowa:

> "If we keep dealing with the drought, I'm sure I could learn a lot about dealing with adverse weather conditions... I'd love to talk to them more about how they manage to have a crop of sweet potatoes. They do a lot of interesting intercropping. In vegetable farming, we need to look more at appropriate technologies. I would have loved to go back again - I'd like to spend more time looking at what might be transferrable." - Iowan Vegetable Farmer

Summary of Learning Through the "Bridging the Gap" Program

As a group, Ugandan farmers learned more specific agricultural practices through the Bridging the Gap program than Iowan farmers did. Every Ugandan farmer interviewed pointed to multiple farming practices that they had initiated or modified due to the advice of the Iowan farmers. Ugandan farmers learned and implemented seven specific agricultural practices as a result of the Bridging the Gap program: using tarps and shellers for improved grain quality, marketing maize as a group, planting in lines, planting high quality seed and doing germination tests, increasing production of soybeans, farm recordkeeping, and marketing soybeans as a group. Most Ugandan farmers had implemented most of these practices. Ugandan farmers described these new farming practices positively as having major impacts on their lives, on the success of their farms, and on the health of their families. The Bridging the Gap program also led to transformational learning among Ugandan farmers, who increasingly viewed farming as a business and who empowered

themselves to pass on the farming practices that they learned from the Iowan farmers, becoming teachers as well as farmers.

Table 3: Learning by Ugandan Farmers

Type of Learning	Incidents of Learning
Ordinary-Practical	1) Using tarps and bicycle shellers on maize harvest (Grain Quality Objective)* 2) Collectively marketing maize (Group Marketing Objective)* 3) Planting soybeans and maize in lines (Production Objective)* 4) Planting high quality seed and doing germination tests (Production Objective)* 5) Raising soybean production by increasing area planted (Production Objective)* 6) Farm recordkeeping (Recordkeeping Objective)*
Ordinary-Conceptual	1) Collectively marketing soybeans (Group Marketing Objective)*
Transformational-Personal	1) Seeing themselves as competent farmers and businesspeople 2) Feeling in control of their farms
Transformational-Relational-Local	1) Teaching other farmers in their area 2) Acting as community leaders 3) Becoming more assertive towards VEDCO
Transformational-Relational-International	1) Seeing Americans as less mysterious 2) Realizing that Ugandans can teach American farmers

* Incidents of learning that led to the implementation of a new farming practice

Taken as a group, the Iowan farmers implemented three specific agricultural practices on their farms as a result of the Bridging the Gap program: growing sweet potatoes the Ugandan way, reducing custom-spraying of pesticides, and planting non-GMO soybeans. Two additional agricultural practices were implemented by Iowan farmers in their gardens[21]: growing garden vegetables under partial shade and starting a food garden for the family. No individual Iowan farmer had

[21] Iowan farmers rely on their farms rather than their gardens for income.

implemented more than two of these practices. The Iowan farmers who made changes on their farms described these practices positively, but they did not indicate major impacts on their lives or on the success of their farms. Unlike the Ugandan farmers, the primary benefits to Iowan farmers were not derived from learning improved agricultural practices. However, every Iowan farmer interviewed believed that they could learn about farming from Ugandan farmers, and several Iowans indicated a renewed or stronger appreciation of the ability of Ugandan farmers to teach them about both farming and life overall.

Table 4: Learning by Iowan Farmers

Type of Learning	**Incidents of Learning**
Ordinary-Practical	1) Growing sweet potatoes the Ugandan way* 2) Growing vegetables under partial shade*
Ordinary-Conceptual	1) Reducing custom-spraying of pesticides* 2) Planting non-GM soybeans* 3) Valuing collaboration between farmers
Transformational-Personal	1) Feeling more thankful 2) Adopting an international view of farming 3) Gardening for family consumption* 4) Eating less meat 5) Reducing consumer purchases
Transformational-Relational-Local	1) Acting as teachers and citizen-ambassadors in their communities
Transformational-Relational-International	1) Realizing that Ugandan farmers share commonalities with Iowan farmers 2) Becoming more open to and respectful of cultural differences 3) Realizing that Ugandans can teach Iowan farmers

* Incidents of learning that led to the implementation of a new farming or gardening practice

CHAPTER V

THE INTERSECTION OF LEARNING AND POWER

This chapter focuses on the relationships between learning and power in the "Bridging the Gap" program, with an emphasis on the third and fourth research questions: how does power impact learning in these partnerships, and can transformational learning change the power relations between developed and developing country partners? The experiences of Ugandan and Iowan farmers indicate that both groups were empowered through learning from each other.

Learning led to some reduction in power differences between the Ugandan and Iowan farmers. This reduction was mediated through the realization by both groups that they shared some common values and experiences as women farmers, and that the Ugandan farmers could teach the Iowan farmers as well as learn from them. Power differences were not eliminated, and the greater power of the Iowan farmers versus the Ugandan farmers made it difficult for the Iowans to learn. Power inhibited learning through both the structure of the program and psychological pathways.

Ugandan Farmers' Expectations and Empowerment

Ugandan farmers believed that the purpose of the "Bridging the Gap" program was for Iowan farmers to teach them better ways to farm. They expected to learn new knowledge from the Iowan farmers that would help them to better meet their families' needs for nutrition, access better markets for their produce, and add value through agro-processing. Most Ugandan farmers emphasized the teaching aspect of the program as the justification for the Iowan farmers' visits, though a few also justified their visits with reference to the need to monitor how the program's money was spent and whether Ugandan farmers were implementing what was taught. The Ugandan farmers entered the "Bridging the Gap" program with a desire and expectation to learn, believing that this was a primary goal of the program.

Ugandan farmers were empowered through the "Bridging the Gap" program. The Ugandan farmers' empowerment – their feelings of competence and greater ability to control their environment – came from the interactions between multiple sources. The four major sources of empowerment were material support, VEDCO support, the support of Iowan farmers, and the Ugandan farmers own efforts to take advantage of the opportunities provided through the program and create new opportunities on their own.

The program provided material support, including bicycle shellers, improved soybean varieties, inoculum, tarps, and books for farm recordkeeping. It provided additional support from VEDCO in the form of staff attention and

assistance in locating and accessing banks and markets. The Ugandan farmers gained new knowledge and inspiration from the Iowan farmers, and some also benefited from increased recognition in their communities as a result of their conversations with "White people". The Ugandan farmers played a critical role in their own empowerment, by learning and experimenting alone and with others, and by teaching Ugandan and Iowan farmers.

These sources of empowerment interacted with synergistic results. Through the "Bridging the Gap" program, Ugandan farmers realized their existing goals of improving family nutrition and gaining additional farming knowledge, made progress on their existing goals of accessing better markets and adding value to produce, and began to set new goals in farming and in their new roles as teachers and businesspeople. The Ugandan farmers often described this as "development", which is understood by farmers in Kamuli District as 'progress towards meeting basic needs' (Babikwa, 2004a). Ugandan farmers noted significant improvements in their ability to provide nutritionally adequate diets, resulting in improved health:

> "[The Iowan farmers] told us to give soybean to children as porridge because it is nutritious. The child here was brown before learning to feed soy, now he is fully black. The other child also used to fall sick, but since feeding soy, he's rarely sick" – Ugandan Farmer

The Ugandan farmers' empowerment was not wholly the result of learning, but learning was a necessary element in their empowerment:

> "I feel positive because I'm called on to train other farmers and give seminars. I learn more in seminars because of the knowledge I now have. I feel different because I'm an example." – Ugandan Farmer

Iowan Farmers' Expectations and Empowerment

The Iowan farmers expected the "Bridging the Gap" program to provide them with opportunities to speak with and improve the lives of the Ugandan farmers, and to be able to learn about living and farming in Uganda. Iowan farmers did expect to learn through the program, but they did not see their own learning as a primary program objective.

One of the criteria used to select Iowan farmers to participate in the program was that they had previous experience traveling outside of the United States. The rationale for this decision was that prior experience traveling would reduce the participants' experience of culture shock, allowing them to focus more attention on their program responsibilities. Another effect of this was that several of the Iowan farmers formed their expectations of the program based on their previous travel experiences. One farmer embraced her prior travel experiences as an asset, while also realizing that the "Bridging the Gap" program would have significant differences that she could learn from:

> "I expected to learn a lot, I had worked with farmers in Kenya and Ghana, but not with marketing and grain quality and not with corn and soybeans. So I expected to learn a lot and just hoped that I could provide any skills or experience that I had to help out the program." – Iowan Vegetable Farmer

Other farmers made a conscious effort to avoid basing their expectations of the "Bridging the Gap" program on their previous travel experiences. One farmer, who had traveled to Cuba, Mexico, and Central America as a student, researched

Uganda before going there. She recognized both the value of this research and its incompleteness:

> "I'd talked to Margaret [who organized the program for ISU] and read enough to know a lot. Until you get there and feel it you can't understand the absolute numbers of people out in the countryside and probably the poverty. It's extremely critical that these programs have someone with knowledge like Margaret." – Iowan Vegetable Farmer

Some Iowan farmers expressed a psychological tension between their recognition that the "Bridging the Gap" program provided themselves with benefits of traveling and learning in Uganda, and their strong desire that the Ugandan farmers should be the primary people to benefit from the program. One Iowan farmer was initially conflicted, saying: "At first I battled with expectations of the project. I wanted to go to help others improve their lives, not just for myself." After participating in the program, she believes that sending farmers like her to Uganda was critical to the ability of the "Bridging the Gap" program to improve the Ugandan farmers' lives:

> "So much of the money has to be spent on getting us over there. That's a huge part and it takes so much time to get us over there. Would I change that? No. I think the personal experiences of the women connecting to the women are such a big part of that [program's success]. It's too bad more can't go over there, that it's so costly that way." – Iowan Grain Farmer

The value of the farmer-exchanges was discussed among VEDCO staff as well. While recognizing that the program was providing important benefits to the Ugandan farmers, some on the VEDCO staff thought that the grant money would have provided even more benefits if more had been spent supporting native

Ugandan extension workers rather than flying in so many Iowan farmers[22]. Others on VEDCO staff were strongly in favor of bringing in Iowan farmers:

> "[The Iowan farmers'] biggest role was motivation. They motivated our farmers with their experiences. At first people here thought 'Mzungu don't dig' [White people don't farm]. They see people who share a lot and also come with the technical aspects and demonstrate many things… The biggest part was sharing experiences." – VEDCO Staff

All of the justifications for spending money to send Iowan farmers to Uganda were framed as enhancing the benefits to the Ugandan farmers. Because VEDCO staff and both groups of farmers saw the Ugandan farmers as the beneficiaries of the "Bridging the Gap" program, benefits to the Iowan farmers were seen as incidental positive outcomes or were justified instrumentally, as providing additional benefits to the Ugandan farmers. If both Ugandan farmers and Iowan farmers are considered as beneficiaries of the program, the benefits accruing to the Iowan farmers as a result of their travel to Uganda are inherently justified as measures of program success[23].

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[22] The guidelines for USAID funding of farmer-to-farmer programs would have made it impossible to spend all of the grant money on supporting native Ugandan extension workers. The "Bridging the Gap" program is unusual among farmer-to-farmer programs in that it did fund one full-time VEDCO staffer to support the Ugandan farmers in between the Iowan farmers' visits. Iowan farmers and staff at VEDCO and ISU believe that the decision to fund a VEDCO staffer was critical for reaching the level of success that the "Bridging the Gap" program achieved.

[23] In reauthorizing USAID funding for farmer-to-farmer programs in 2008, Congress included United States famer-volunteers among the intended beneficiaries of the programs. The farmer-to-farmer program is intended by Congress to provide agricultural development benefits overseas and cultural exchange benefits both overseas and to the United States. A mid-term evaluation (Joslyn, et al., 2012) found

Iowan farmers were empowered through the "Bridging the Gap" program. Empowerment was manifested differently for the Iowan farmers than for the Ugandan farmers. Unlike the Ugandan farmers' experiences, the Iowan farmers did not see the new practices that they implemented on their farms as life changing or critical to their success as farmers. The Iowan farmers' empowerment was manifested through a greater sense of gratitude, a stronger or renewed feeling of purpose in farming and sometimes in life, and in some cases through new roles as teachers or citizen ambassadors in their communities. The Iowan farmers' empowerment came primarily through two sources: their interactions with the Ugandan farmers, VEDCO staff, and others in Uganda, and their own efforts as individuals and as teams of farmer-extension providers. As with the Ugandan farmers, learning was necessary for the Iowan farmers' empowerment.

Iowan farmers empowered themselves to take on expanded roles as teachers and citizen-ambassadors, felt more grateful and developed stronger or renewed feelings of purpose:

> "I think personally as a woman, knowing that I have changed other women's lives to help them better care for their families really affects me, really makes me feel like I've done something." – Iowan Grain Farmer

Iowan farmers described the "Bridging the Gap" program in the strongly positive terms that are consistent with experiences of empowerment:

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that USAID faces challenges in designing the grant program so that both objectives are met.

> “It was a fabulous experience, one that I wouldn't trade for anything. It would benefit a lot of people in this country to have such an experience." – Iowan Vegetable Farmer

Learning Led to A Minor Reduction in Power Differences

Both the Iowan and Ugandan farmers described their experiences of empowerment through learning and teaching in language consistent with a reduction in the power difference between the two groups. The power gradient was reduced in two ways.

First, as the Ugandans and Iowans learned about areas of similarity, the Ugandan farmers came to view the Iowan farmers as ordinary people rather than as ‘superhuman’ experts. The Ugandan farmers came to understand that they had some activities and values in common with the Iowan farmers, which broke down some of the mystery surrounding White Americans:

> "I didn't know that even people from US are farmers, now I know… I feel different because I never thought in my life I'd talk with a Mzungu [White person]. I used to just see them in cars but now I've spoken with them for hours." – Ugandan Farmer

In order for the Ugandan farmers to relate to the Iowan farmers as partners, they must see the Iowan farmers as ordinary people with strengths and weaknesses rather than as ‘superhuman’ experts who can solve any problem using their wealth and superior knowledge. As Ugandan farmers talked with the Iowan farmers, they increasingly saw the Iowans as ordinary people who they could relate to, and possibly even teach. This reduction in the power gradient was experienced

as empowering by both groups of farmers, as each wanted to relate to the other group as partners. Both groups described the similarities that they discovered through the program as a source of joy.

Some Ugandan farmers who had previously seen Americans as mysterious, superior, and untouchable came to realize that they had taught, and could continue to teach the Iowan farmers valuable lessons:

> "[I taught the Iowan farmers] how to make sauce out of soy and how to roast soy the local way, also winnowing, and how to use the hand hoe. I'd like them to learn how to make baby foods and how to mix it good. Also how to make coffee out of soybean and how to make milk the local way." – Ugandan Farmer and Group Leader

> "[The Iowan farmers] learned how I was drying my beans, because I hang them up. They'd never seen anyone do that. They learned how I was charging phones on solar panels. They learned how to make the mats [out of reeds], and also about new fruits and cassava in my garden… I learned that Whites are farmers, but I got to learn they're also farmers like us." - Ugandan Farmer and Group Leader

The belief that the Ugandan farmers can teach the Iowan farmers is incompatible with a totally asymmetric relationship, as it implicitly recognizes that the Ugandan farmers have a source of power over the Iowan farmers. Specifically, the Ugandan farmers have the power to choose whether to teach the Iowan farmers or not.

All of the Iowan farmers believed that they could learn from the Ugandan farmers. In several cases, Iowan farmers went beyond a tacit recognition of the

Ugandan farmers' power to teach by pointing out specific areas where the Ugandan farmers are more successful than farmers in Iowa:

> "They use their resources far better. They also have bugs and disease and everything like that, they just don't have the resources like I do to control it. And so it was amazing to see how they do handle things like that." – Iowan Grain Farmer

> "They could teach us a lot about working together as a community. I think that something I always take away from my visits to Africa is just how well the community works together. How no one is looking out for their own best interest but everyone is looking out for the best interest of everyone. I think that's something we lose here in America." – Iowan Vegetable Farmer

Both groups of farmers recognized the Ugandan's ability to teach the Iowans as a source of power held by the Ugandan farmers, but neither group thought of this power as making their relationship adversarial. Instead, this recognition shifted the partnership towards mutuality[24]. The Iowan farmers desired to learn from the Ugandan farmers and the Ugandan farmers desired to teach them. Every farmer who recognized the potential for the Ugandans to teach the Iowans described it in positive terms, as a source of solidarity rather than a source of fear. This was not lost on VEDCO staff, who observed that the farmers' interactions featured listening and sharing by both groups.

As predicted by Percy (2005), the reduction in the power gradient during the "Bridging the Gap" program resulted primarily through transformational

[24] As indicated earlier, the recognition and experience of mutual learning as a source of mutuality in a partnership had a similar affect on town planners from Uganda and the United Kingdom (Johnson and Wilson 2006) and on extension workers and farmers in Uganda (Babikwa 2004a).

learning. The experiences of the farmers in the "Bridging the Gap" program further suggest that the power gradient was reduced by the recognition that the Ugandan farmers could teach the Iowan farmers something of value. Recognition of actual or potential ordinary, as well as transformational, learning among the Iowan farmers as a result of the Ugandan farmers' knowledge led to transformational learning for farmers in both groups. For example, those farmers who talked about how the Ugandans had, or could, teach the Iowan farmers to grow vegetables and sweet potatoes experienced transformational learning as their frames of reference changed to accommodate this source of power among the Ugandan farmers. This transformational learning was a source of empowerment for both groups of farmers.

Power Was Not Fully Equalized Through Learning

The learning that took place during the "Bridging the Gap" program did not result in a complete equalization of the difference in power between the Iowan and Ugandan farmers. Some of the Ugandan farmers continued to believe that they have nothing of value to teach the Iowan farmers. Those who held this belief justified it by referencing the asymmetry built into the structure of the partnership:

> "[The Iowan farmers] cannot learn anything from us, because we are always learning from the United States. Because we're changing, we don't have anything to teach them." – Ugandan Farmer

The continued existence of a power difference was most evident when some of the Ugandan farmers talked as though the Iowan farmers had placed conditions on the future provision of assistance:

> "They promised to bring a machine that makes cooking oil, but after working hard, if we increase production the machine will be brought." – Ugandan Farmer

During the interviews, the Iowan farmers described a conscious effort to approach the Ugandan farmers respectfully and avoid placing conditions on the aid. However, the Ugandan farmers perceptions do reflect a real power difference in the partnership insofar as the Iowan farmers could have chosen to place conditions on their assistance without consulting the Ugandan farmers beforehand.

Of course, a complete equalization of power should not be expected from a farmer-to-farmer program. The Iowan farmers remain more powerful than the Ugandan farmers in many ways. Iowan farmers remain wealthier and they remain citizens of the world's current superpower. The Iowan farmers have greater access to economic resources, which enables them to maintain more stability in their livelihoods and to enjoy a far higher level of consumption than the Ugandan farmers can access. The Iowan farmers have greater access to formal education, which enables them to generate and acquire more of the scientific and formal knowledge that is currently privileged over traditional knowledge. Furthermore, the Iowan farmers have access to institutions such as ISU and USAID that enabled them to travel to Uganda as teachers through the program. The Ugandan farmers

lesser access to these institutions precluded them from reciprocal travel to the United States to teach Iowan farmers.

The "Bridging the Gap" program wasn't intended to change these realities. The "Bridging the Gap" program was successful when measured against the goals of farmer-to-farmer programs as stated by Congress. Economic development was promoted in Uganda, and Ugandan and Iowan farmers were provided opportunities for empowerment through cultural exchanges. The experiences of farmers in the "Bridging the Gap" program suggests that transformational learning was a significant driver of this empowerment.

The Structure of the Program Hindered Learning by Iowan Farmers

Learning among Iowan farmers was not a priority when the "Bridging the Gap" program was designed. The goals that Congress provided for farmer-to-farmer programs are to promote economic development in the host countries and benefit participants through cultural exchanges. Changes to farmer-to-farmer programs in order to promote learning by US farmers will need to be made in a manner that does not compete with the primary goals of the programs.

As would be expected, the decision by ISU and VEDCO staff not to place a heavy emphasis on learning among Iowan farmers led to a program design that presented barriers to such learning. Many Iowan farmers brought up a lack of time to learn when describing the difficulties they had in learning from Ugandan farmers:

> "There's a limit too on what you can ask, and for those questions you almost need an interpreter. And you only have so much time... I feel bad saying that I didn't learn anything that I could use here... You might get the sense there isn't anything of value that they could teach but that's not the case." – Iowan Grain Farmer

At least three factors could have led the Iowan farmers to perceive that they had too little time to learn. First, the focus that the program schedule placed on teaching the Ugandan farmers left relatively less time for learning by the Iowan farmers. Explicitly scheduling open time for Iowan and Ugandan farmers to informally interact would address this concern. Second, in the absence of a curriculum the Iowan farmers relied on informal conversations to learn from the Ugandan farmers, and the program provided too few translators to accommodate these conversations. This barrier could be overcome through providing additional translators.

Third, the Iowan farmers were not prepared to learn nor the Ugandan farmers prepared to teach, likely resulting in missed opportunities for learning by Iowan farmers. This barrier would be expected due to the role of power in the partnership. Theoretically, the Iowan farmers' greater power in terms of their position as teachers in the program and their higher access to resources and to privileged scientific and formal knowledge would reduce their incentive to learn from the Ugandans and make them more likely to unintentionally overlook or dismiss valuable knowledge possessed by the Ugandan farmers (Babikwa, 2004a,b; Percy, 2005).

The Iowan farmers' experiences included intuiting that they could learn from the Ugandans, yet the Iowan farmers were largely unable to articulate the practices or concepts that the Ugandans could teach them about. This combination suggests that the Iowan farmers recognized that there was value in the Ugandan farmers' body of knowledge taken as a whole, but that they overlooked or dismissed some of the values or viewpoints that are necessary for understanding and analyzing the body of knowledge[25]. An inability to analyze the Ugandan body of knowledge would leave the Iowan farmers unable to identify which sub-areas of knowledge they could learn from, leading to the experiences they described.

The experiences of the subset of Ugandan farmers who didn't think about what they might be able to teach the Iowans are consistent with the theory that the positioning of Iowans as teachers with privileged knowledge led the Ugandans to devalue their own knowledge rather than sharing it with the Iowan farmers. Additional preparation for learning before and between exchanges would have helped both groups of farmers to recognize and take advantage of the opportunities that were presented for Iowan farmers to learn, and that may have been missed as a result of the influences of power on learning in the program.

It is possible that additional learning would occur among Iowan farmers if changes were made to encourage informal conversations during exchanges,

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[25] As described earlier, it is easier for a more powerful actor to overlook or dismiss others' values and viewpoints than vice-versa (Chambers, 1994; Brown, 1997; Fox, 1999). The greater power of the Iowan farmers vis-à-vis the Ugandan farmers made it more difficult for the Iowan farmers to learn.

prepare both groups of farmers between the exchanges, and facilitate communication between exchanges. There are, however, two alternative explanations for why the Iowan farmers did not learn more from the Ugandan farmers. First, the Iowan farming system might be so different from the Ugandan farming system that most of the Ugandan farmers' knowledge is simply not applicable to the Iowans' farms. Second, the greater power held by the Iowan farmers might distort the learning process to such a degree that no amount of preparation would enable additional learning.

Do Differences in Farming Systems Preclude Further Learning?

It is possible to conclude that the Iowan and Ugandan farming systems are simply too different for the Iowans to learn much from the Ugandans. However, the Iowan farmers' intuition that they could learn a great deal from the Ugandan farmers cautions against jumping to such a conclusion. Some of the Ugandan farmers' knowledge, such as using a hand hoe or growing cassava, will not be useful in the Iowan farming system. Of course, some of the Iowan farmers' knowledge, such as operating a tractor, will also not be useful to the Ugandan farmers in their current farming system. Both groups of farmers and the program staff identified specific lessons that the Iowan farmers taught the Ugandan farmers, which proved to be useful to the Ugandan farmers despite the differences in the two farming systems. This suggests that the asymmetrical patterns of learning are more about differences in power than differences in farming systems.

The greater power of the Iowan farmers presented them with opportunities to teach the Ugandan farmers that the latter could not reciprocate. The Iowan farmers had access to ISU staff and the Internet, and were able to learn about the Ugandans' farming system before ever travelling to Uganda. The Ugandan farmers had extremely limited access to the Internet, and VEDCO staff did not know the structure, challenges, and opportunities of the Iowans' farming system in the way that ISU staff knew about the Ugandans' farming system.

Both the Iowan and Ugandan farmers learned about each other's respective farming systems during the exchanges, but the Iowan farmers had the benefit of travelling to Uganda and seeing the Ugandan farming system in person. Ugandan farmers' knowledge of the Iowans' farming system was limited to what the Iowan farmers taught them through conversations and pictures. Many Ugandan farmers desired to travel to visit the Iowans' farms, both to learn from the Iowans and to find out what they could teach:

> "We need to tour the United States, if possible. I want to go there and get more knowledge from those people. I can teach them, maybe on the environment. After I reach the United States and compare the environment there and here, I can teach them." – Ugandan Farmer

Do Differences in Power Preclude Further Learning?

Theory predicts that learning is more difficult for the more powerful actor in an asymmetrical partnership. However, the experiences of development professionals (Institute of Development Studies, 2010; Sinclair, 2012) and the Iowan farmers in this case demonstrate that such learning is possible. The question

then becomes whether the Iowan farmers learned everything they could from the Ugandan farmers given the asymmetries of power as they were at the time of each exchange. The Iowan farmers' intuition that they could have learned more from the Ugandan farmers indicates that further learning is possible under the asymmetrical balance of power in the "Bridging the Gap" program.

Summary of Power Dynamics in the "Bridging the Gap" Program

The Iowan farmers had more power in the "Bridging the Gap" program due to their greater access to resources and to scientific knowledge, the privilege of their lighter skin color and US nationality, and their position as teachers within the structure of the program. Power made it difficult for the Iowan farmers to learn from the Ugandan farmers, through both structural and psychological affects. However, the Iowan farmers did learn some lessons from the Ugandan farmers, and both groups were empowered by their experiences learning from each other. Mutual learning led to some reduction in power differences between the Ugandan and Iowan farmers over the course of the program. This reduction was mediated through the realization by both groups that they shared some common values and experiences as women farmers, and that the Ugandan farmers could teach the Iowan farmers as well as learn from them.

CHAPTER VI

CONCLUSION

The "Bridging the Gap" program provides a case to explore the relationships between learning and power in international agricultural development partnerships. Both Ugandan and Iowan farmers learned from each other through the "Bridging the Gap" program. Both groups experienced both ordinary and transformational learning, and both groups were empowered by what they learned. The experiences of farmers in the program support the theories that power distorts the learning process and that mutual learning reduces power differences in asymmetrical partnerships for development. An analysis of the experiences of farmers in the "Bridging the Gap" program points to options that future farmer-to-farmer programs with similar designs should consider in order to facilitate learning by American farmer-volunteers. In general, planners should be aware of the roles of power and learning when designing programs and facilitating development in their own communities and internationally.

Learning by Ugandan Farmers

Learning by Ugandan farmers was primarily in the form of practical lessons to better enable them to implement their existing goals of feeding their families and

making a living on their farms. Every Ugandan farmer interviewed pointed to multiple farming practices that they had initiated or modified due to the advice of the Iowan farmers. Ugandan farmers learned and implemented seven specific agricultural practices as a result of the Bridging the Gap program: using tarps and shellers for improved grain quality, marketing maize as a group, planting in lines, planting high quality seed and doing germination tests, increasing production of soybeans, farm recordkeeping, and marketing soybeans as a group. The "Bridging the Gap" program also led to transformational learning among Ugandan farmers, who increasingly viewed farming as a business and who empowered themselves to pass on the farming practices that they learned from the Iowan farmers, becoming teachers as well as farmers.

Learning by Iowan Farmers

Despite it not being a primary program objective, Iowan farmers learned from Ugandan farmers through the "Bridging the Gap" program. Taken as a group, the Iowan farmers implemented three specific agricultural practices on their farms and two in their non-commercial gardens as a result of the Bridging the Gap program: growing sweet potatoes the Ugandan way, reducing custom-spraying of pesticides, planting non-GMO soybeans, growing garden vegetables under partial shade, and starting a food garden for the family. The Iowan farmers who made changes on their farms described these practices positively, but they did not indicate major impacts on their lives or on the success of their farms.

Unlike the Ugandan farmers, the primary benefits to Iowan farmers were not derived from learning improved agricultural practices. However, every Iowan farmer interviewed believed that they could learn about farming from Ugandan farmers, and several Iowans indicated a renewed or stronger appreciation of the ability of Ugandan farmers to teach them about both farming and life overall. Iowan farmers saw their experiences in Uganda as improving them as people, as farmers, and as global citizens.

Implications for Theory

Literature on learning and power in international development (Chambers, 1994; Babkiwa, 2004a,b; Worth, 2006) and within organizations (Brown, 1997; Fox, 1999; Lawrence et al., 2005), predicts that power will distort the learning process to make learning more difficult for the more powerful partner through its influence on the structure of the program and the psychology of the partners. Iowan farmers did express difficulty in learning from the Ugandan farmers. The experiences of the Iowan farmers in the program supports the theory that power influenced their learning through the structure of the program, and are consistent with the theory that power influenced their learning through psychological pathways.

Both Iowan and Ugandan farmers attributed the difficulty that Iowan farmers had in learning to the structure of the "Bridging the Gap" program. The program positioned the Iowan farmers as teachers and the Ugandan farmers as

learners, did not provide the Ugandan farmers with sufficient background information about the Iowan farming system to act as teachers, and did not prepare the Iowan farmers adequately to focus on learning as well as teaching. These decisions are indicative of a structural asymmetry in which the Iowan farmers have more power than the Ugandan farmers. Furthermore, the subset of Ugandan farmers who did not believe that they could teach the Iowan farmers anything worthwhile justified this viewpoint by referencing these structural asymmetries.

Chambers (1994) and Babikwa (2004a) predict that power hinders learning through psychological pathways as well as structural pathways. Specifically, a more powerful partner is predicted to have difficulty learning from a less powerful partner because their power enables them to more easily overlook or dismiss the values and viewpoints of the less powerful partner. The experiences of Iowan farmers, especially the combination of their intuition that they could learn with their inability to articulate more specifically what types of lessons they could be taught, are consistent with the theory that power differences impacted their learning through psychological pathways. The Iowan farmers' intuition that they could learn from the Ugandan farmers indicates that they recognized that the Ugandan's body of knowledge was valuable as a whole, but their inability to articulate what lessons could be learned and taken back to Iowa indicate that something important was indeed being overlooked.

Worth (2006, 2009) and Babikwa (2004a) predict that transformational learning by the more powerful partner will lead to a reduction in the power

gradient between partners in an asymmetrical relationship. This was the case in the "Bridging the Gap" program, where those Ugandan farmers who realized that the Iowan farmers had learned or could learn from them talked about the partnership in terms of inspiration and solidarity, while those Ugandan farmers who thought they had nothing to teach the Iowan farmers used language more consistent with charity.

The theory that mutual learning improves the outcomes of development projects (Chambers, 1994; Babikwa, 2004a; Johnson and Wilson, 2006; Worth, 2006) is supported by the fact that both Iowan farmers and Ugandan farmers were empowered by their learning through the "Bridging the Gap" program.

Improving Learning By US Farmers in Farmer-to-Farmer Programs

Based on this study of the relationships between learning and power in the "Bridging the Gap" program, one can suggest four relatively modest changes that would improve learning by US farmers in similar programs: 1) facilitate more informal conversations between US and host-country farmers during the exchanges; 2) prepare US farmers to learn through conversations and structured reflection processes before and between exchanges; 3) prepare host-country farmers to teach through non-mandatory, informational activities before and between exchanges; and 4) facilitate more communication between US and host-country farmers between exchanges.

Facilitating Informal Conversations

Farmer-to-farmer programs that follow the "Bridging the Gap" program's method of sending groups of US farmers to meet with multiple groups of host-country farmers should consider designs that provide for more time for informal conversations. In contrast to formal conversations, informal conversations are spontaneous and unconstrained by an explicit agenda or predetermined set of outcomes. Informal conversations would support learning among US farmers by providing space for US farmers to ask questions and host-country farmers to teach on topics that are not part of the designated program curriculum. Farmer-to-farmer programs cannot force informal conversations, but they can facilitate informal conversations by reserving blocks of time for US and host-country farmers to interact without an agenda or predetermined set of objectives, and by providing enough interpreters to keep spontaneous exchanges going.

Iowan and Ugandan farmers thought that the two to three hour meetings were not long enough for many of these informal conversations to take place. Scheduling additional, unstructured time for Iowan and Ugandan farmers to interact outside of the formal program meetings would have opened space for informal conversations. Additional interpreters would need to be provided to help both groups of farmers take advantage of these opportunities for spontaneity. Providing additional activities before and between exchanges to prepare Iowan farmers to learn and Ugandan farmers to teach would also help them to recognize and take advantage of these opportunities.

Preparing US Farmers to Learn

Providing additional activities for US farmers before and between exchanges would support their learning in several ways. Pre-exchange activities would have increased Iowan farmers' readiness to learn by encouraging them to think critically about the strengths and weaknesses of their farms and farming systems, their personal goals and their goals as farmers, and questions that they would like to ask the Ugandan farmers. Pre-departure activities to promote informal conversations between new farmers and farmers who had been on previous exchanges would have helped Iowan farmers learn by allowing them to build on the knowledge gained from each exchange. Post-trip debriefings would have helped Iowan farmers to learn through reflection, and presentations by each returning set of farmers to the whole group would have provided further continuity of learning over time.

Research on service-learning emphasizes that continual cycles of facilitated and informal reflection as individuals and groups are important in supporting learning through service (Eyler & Gyles, 1999). Resources for practitioners (ie: Gonzalez, 2009) provide advice on best practices for reflection that may be useful to future farmer-to-farmer programs. In the specific case of the partnership between ISU and VEDCO, the experiences of professors and staff in managing an ongoing, separately funded service-learning program for undergraduate students could also have been helpful in supporting learning and reflection among Iowan farmers.

Barriers of distance and time would have to be overcome in order to successfully add activities for US farmers between exchanges. Hosting the activities through the Internet could reduce the barriers of distance. Additional activities would require the farmers to take more time out of their schedules, which could prove an insurmountable barrier to some. Flexible scheduling would help reduce this barrier, and the opportunity to connect or reconnect with other farmers who also participated in the program might encourage farmers to find the necessary time.

Preparing Host-Country Farmers to Teach

Providing additional activities for host-country farmers between exchanges would support US farmers' learning to the extent that these activities improve the host-country farmers' understanding of US farming systems. Activities conducted before exchanges in order to present information about Iowa's farming systems and facilitate discussions about weaknesses and possible solutions would have placed Ugandan farmers in a better position to teach Iowan farmers during the exchanges.

Additional activities for Ugandan farmers would have faced significant barriers of time. Ugandan farmers already lack time to implement valuable agricultural practices such as composting, and it is quite likely that they would simply not have had enough time for additional activities between exchanges. On

the other hand, Ugandan farmers were extremely interested in the United States and might have appreciated the opportunity to learn more.

From an ethical perspective, it would be critical to present these activities to host-country farmers in a manner that makes them truly voluntary. The difficulty of this task is highlighted by the fact that some Ugandan farmers believed they needed to impress the Iowan farmers in order to receive continued support. In some cases, the difficulty of presenting additional activities in a way that makes them truly voluntary may be insurmountable. In these cases, it would be unethical to make this alteration to farmer-to-farmer programs.

Facilitating Communication Between Exchanges

Both US farmers and host-country farmers would benefit from a process to facilitate communication between exchanges. This would have helped Iowan farmers learn by allowing them to ask questions of the Ugandan farmers that surfaced after their trips to Uganda. Alongside a program of activities for Iowan farmers between exchanges, this line of communication would have facilitated learning by Iowan farmers by extending their relationship with the program beyond the duration of their time in Uganda.

Facilitated communication between exchanges would have benefitted Ugandan farmers by helping them troubleshoot difficulties in implementing the new farming practices that they were taught. This help would most likely have come as a result of Iowan farmers working with VEDCO staff to brainstorm or

research solutions. Of course, the Iowan farmers' ability to help would have been limited by their levels of interest and available time.

A few of the Iowan farmers did keep in contact with Ugandans, mostly by emailing VEDCO staff and occasionally communicating with Ugandan farmers through VEDCO staff. Iowan farmers generally thought that periodic communication with Ugandan farmers between exchanges would desirable, but that it was not enough of a priority to warrant the effort it would have taken without facilitation through the program. Many Ugandan farmers desired to communicate with Iowan farmers between exchanges, and a few were disappointed that they didn't have the Iowans' contact information.

Unlike the other program alterations, which are for consideration by future farmer-to-farmer programs, the possibility of continued communication remains possible for farmers who participated in the "Bridging the Gap" program. A coordinated effort to facilitate continued communication would require funding to compensate VEDCO staff for their time and Internet costs. A strategy would need to be implemented to facilitate communication between the Ugandan farmers, who lack access to computers and are computer illiterate, and VEDCO staff. One possibility would be for Ugandan farmer groups to communicate questions and answers with VEDCO staff during regular extension visits, with VEDCO staff subsequently passing this on to the Iowan farmers from the VEDCO office.

Future farmer-to-farmer programs, especially those that are structured similarly to the "Bridging the Gap" program, should consider supporting additional

learning by American farmers through supporting more informal conversations during the exchanges, providing service-learning-inspired reflection activities for both groups of farmers, and facilitating communication between American and host-country farmers between exchanges.

General Implications for Planning Practice

The relationships between learning and power are important for planners to be aware of whenever they assume the role of a professional facilitator of development within a community. To be effective, planners must be aware of their own power and that of the citizens or groups of citizens that they work with. Power comes from greater access to resources, but also from the possession of privileged academic or scientific knowledge and from occupying a privileged position as a teacher or an expert for others to learn from. Planners will almost always occupy a privileged position during the exercising of their professional obligations, and should be aware of their own power as well as that of the citizens and groups of citizens that they are working with.

In addition to being aware of their own power and that of others, planners should be aware that power makes it harder to learn. In their own professional lives, planners should recognize that their position of power makes it harder for them to learn because they are more easily able to overlook or dismiss the viewpoints and values of citizens that they are working with. Particularly powerful groups of citizens are likely to run into similar challenges, and planners should

consider exercises, including reflection activities, to facilitate their own learning and that of others.

Planners should also recognize that mutual learning tends to reduce power gradients within the context of development programs. Powerful groups may feel threatened by a more equitable power gradient, but they may also experience a sense of solidarity and empowerment as they enter into deeper relationships with people who were originally relatively powerless in comparison to them. Planners should be aware of both possibilities, as well as their ethical and professional obligations to promote the public good while facilitating socially just processes and outcomes (Brooks, 2002).

Finally, planners should always recognize the power of relationships within the planning process – both between planners and citizens and between groups of citizens. One may speculate that farmer-to-farmer programs derive much of their developmental efficacy from the fact that two groups of farmers acting as ordinary citizens can develop deeper and more multi-layered relationships than a group of farmers can form with an agricultural extension worker or planner. Development professionals such as extension workers and planners are limited practically and often ethically to forming only professional relationships with people in the communities that they are assisting. Langin and Ensign (2010) argue convincingly that relationships are *the* critical driver of successful development, and it is quite possible that US farmers' lack of professional training as planners or extension workers is compensated for by their greater ability to form deep and multi-layered

relationships with farmers in the countries they visit. Indeed, each of my recommendations for improving learning within farmer-to-farmer programs involves opening space for and encouraging deeper, more multi-faceted relationships between farmers from the US and farmers in their host countries. Though particularly relevant for international development partnerships, planners everywhere would benefit from a renewed focus on relationships as the force that drives any community towards that which is good.

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APPENDIX

INTERVIEW PROTOCOL for UGANDAN FARMERS

Name:
Organization/Group:
Date:
Location:

INTRODUCTION:
My name is Stephen Lauer and I'm a graduate student in community planning and sustainable agriculture at Iowa State University. My masters thesis research includes an evaluation of the "Bridging the Gap" farmer exchange program between farmers in Iowa and Uganda. This research will help improve farmer exchange programs in the future. I'm requesting that you participate in this interview because of your involvement with the farmer exchange program. Please know that your participation is entirely voluntary, and you are free to skip any questions that you don't wish to answer. You may withdraw from the interview at any time without penalty. Do you consent to be interviewed?

BACKGROUND QUESTIONS
First, I'd like to ask you some questions about your farm.

- How long have you been a farmer?
- Do you have other jobs or activities that provide income?
- What do you raise on your farm?
- How large is your farm? Do you own or rent the land?
- How many people does your farm support? How large is your family?
- How do you feel about farming? Are you proud to be a farmer?

PROGRAM INVOLVEMENT QUESTIONS
Next I'm going to ask you some questions about your involvement in the farmer exchange and business development program.

- How did you become involved in the farmer exchange and business development program with VEDCO?
- How long have you been involved with VEDCO?
- What do you think is the main goal or objective of the farmer exchange and business development program?
- What did you expect you would experience going into the program? Were there any surprises?

- What did you expect from the program? Have your expectations been met?
- How many groups of American farmers did you speak with?
- How many hours did you spend talking with American farmers?
- Do you remember the names of any of the American farmers you spoke with? Have you kept in contact with any of the American farmers?
- What did you speak to the American farmers about?
- What was one conversation that you had with the American farmers that stands out in your memory?

ORDINARY LEARNING QUESTIONS:
Next, I'm going to ask you questions about the topics that you may have covered when speaking with the American farmers.

- Did you talk with the American farmers about:
    - Grain quality?
    - Collaborative marketing?
    - Agricultural production?
    - Farm recordkeeping?
- Have you made any changes on your farm after talking with the American farmers about:
    - Grain quality?
    - Collaborative marketing?
    - Agricultural production?
    - Farm recordkeeping?
- What do you do differently now?
- Have these changes been helpful to you? If so, how?
- Has your role in the community changed because of the changes you made on your farm? If so, how?
- Have you taught other farmers about what you learned about:
    - Grain quality?
    - Collaborative marketing?
    - Agricultural production?
    - Farm recordkeeping?
- Has your role in the community changed because you are teaching other farmers? If so, how?
- Do you think the American farmers learned anything from you about:
    - Grain quality?
    - Collaborative marketing?
    - Agricultural production?
    - Farm recordkeeping?
- What else do you think the American farmers could learn from you?

TRANSFORMATIONAL LEARNING QUESTIONS
Now I'm going to ask you about how your experiences in the farmer exchange and business development program impacted you personally and as a farmer.

- Do you think about the United States of America differently after talking with the American farmers? If so, how?
- Do you think differently about yourself after talking with the American farmers? If so, how?
- Do you think differently about farming after talking with the American farmers? If so, how?

ADDITIONAL NOTES:

INTERVIEW PROTOCOL for IOWAN FARMERS

Name:
Organization/Group:
Date:
Location:

INTRODUCTION:
My name is Stephen Lauer and I'm a graduate student in community planning and sustainable agriculture at Iowa State University. My masters thesis research includes an evaluation of the "Bridging the Gap" farmer exchange program between farmers in Iowa and Uganda. This research will help improve farmer exchange programs in the future. I'm requesting that you participate in this interview because of your involvement with the farmer exchange program. Please know that your participation is entirely voluntary, and you are free to skip any questions that you don't wish to answer. You may withdraw from the interview at any time without penalty. Do you consent to be interviewed?

BACKGROUND QUESTIONS
First, I'd like to ask you some questions about your farm.

- How long have you been a farmer?
- Do you have other jobs or activities that provide income?
- What do you raise on your farm?
- How large is your farm? Do you own or rent the land?
- How many people work on your farm? How large is your family?
- How do you feel about farming? Are you proud to be a farmer?

PROGRAM INVOLVEMENT QUESTIONS
Next I'm going to ask you some questions about your involvement in the farmer exchange program.

- How did you become involved in the Uganda farmer exchange program?
- When did you travel to Uganda?
- Who went with you to Uganda?
- Had you traveled outside of the United States before going to Uganda?
- What did you expect you would experience going into the program? Were there any surprises?
- What do you think the goals or objectives of the program were? Do you think the program met those objectives?
- How much time did you spend talking with each Ugandan farmer?

- Do you remember the names of any of the farmers you spoke with? Have you kept in touch with the farmers?
- What was one conversation that you had with the Ugandan farmers that stands out in your memory?

ORDINARY LEARNING QUESTIONS:
Next, I'm going to ask you questions about the topics that you may have covered when speaking with the Ugandan farmers.

- Did you talk with the Ugandan farmers about:
    - Grain quality?
    - Collaborative marketing?
    - Agricultural production?
    - Farm recordkeeping?
- What problems did you identify in Uganda with:
    - Grain quality?
    - Collaborative marketing?
    - Agricultural production?
    - Farm recordkeeping?
- What advice did you give to the Ugandan farmers on how to improve:
    - Grain quality?
    - Collaborative marketing?
    - Agricultural production?
    - Farm recordkeeping?
- Do you think that your advice made a difference to the farmers in Uganda?
- What do you think the Ugandan farmers could teach you about farming?
- Did the Ugandan farmers teach you anything about:
    - Grain quality?
    - Collaborative marketing?
    - Agricultural production?
    - Farm recordkeeping?
- Have you made any changes on your farm after talking with the Ugandan farmers? What do you do differently now?
- Have these changes been helpful to you? If so, how?
- Has your role in the community changed because of the changes you made on your farm? If so, how?

TRANSFORMATIONAL LEARNING QUESTIONS
Now I'm going to ask you about how your experiences in Uganda impacted you personally and as a farmer.

- What do you see as the main benefits of the "Bridging the Gap" program to you personally? Why do you say this?
- Do you think about Ugandans differently after talking with the Ugandan farmers? If so, how?
- Do you think differently about yourself after talking with the Ugandan farmers? If so, how?
- Do you think differently about farming after talking with the Ugandan farmers? If so, how?
- Did you see any significant change in your general attitude as a result of participating in the "Bridging the Gap" program?
- Does what you learned in Uganda continue to impact your life today? How so? Why?

CONCLUDING QUESTION

- Is there anything else you want to tell me? Is there anything you want to know from me?

ADDITIONAL NOTES:

INTERVIEW PROTOCOL for PROGRAM STAFF

Name:
Organization/Group:
Date:
Location:

INTRODUCTION:
My name is Stephen Lauer and I'm a graduate student in community planning and sustainable agriculture at Iowa State University. My masters thesis research includes an evaluation of the "Bridging the Gap" farmer exchange program between farmers in Iowa and Uganda. This research will help improve farmer exchange programs in the future. I'm requesting that you participate in this interview because of your involvement with the farmer exchange program. Please know that your participation is entirely voluntary, and you are free to skip any questions that you don't wish to answer. You may withdraw from the interview at any time without penalty. Do you consent to be interviewed?

INTRODUCTORY QUESTIONS
- How long have you worked with your organization?
- How long have you been involved with farming and extension personally? How long have you been employed in farming or extension?
- How did the "Bridging the Gap" program get started?
- Have you been involved in "Bridging the Gap" since the beginning?
- What was your role in the overall implementation of "Bridging the Gap"?

PROGRAM EVALUATION QUESTIONS
- What is the purpose of the "Bridging the Gap" program?
- How were farmers selected to participate in the "Bridging the Gap" program?
- Do you think that "Bridging the Gap" has met its objectives? Explain.
- What are some of the successes of the "Bridging the Gap" program?
- Do you see any areas where "Bridging the Gap" could be better at serving its purpose?
- Is there anything that you would change about "Bridging the Gap"? Why?

ORGANIZATIONAL BENEFITS QUESTION
- In what specific ways has your organization benefited from the "Bridging the Gap" program?

CONCLUDING QUESTION

- Is there anything else that you would like me to know about the "Bridging the Gap" program?

ADDITIONAL NOTES: